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Roster of Editorial Board appears in this issue at beginning of
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Leaflet Regarding Rules of Publication.—CALIFORNIA AND
WESTERN MEDICINE has prepared a leaflet explaining its rules
regarding publication. This leaflet gives suggestions on the
preparation of manuscripts and of illustrations. It is suggested
that contributors to this Journal write to its offices requesting a
copy of this leaflet.

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EDITORIALS

NEXT YEAR'S ANNUAL SESSIONS OF AMERICAN AND CALIFORNIA MEDICAL ASSOCIATIONS

**American Medical Association Is Scheduled
to Hold Its 1946 Annual Session in San Fran-
cisco.**—At the meeting of the A.M.A. held in
1940, its House of Delegates voted to hold the
1943 meeting in San Francisco. However, trans-
portation difficulties arose and prevented the
annual conference in San Francisco in 1943. The
House of Delegates then voted to hold the Annual
Session of 1946 in San Francisco (the places of
an A.M.A. Annual Session are voted on three
years in advance).

If ample hotel and meeting room facilities can
be made available for the American Medical
Association, and provided, transportation diffi-
culties will not interfere, it follows that the 1946
A.M.A. Annual Session should be held in San
Francisco.

The C.M.A. headquarters office, in conference
with the San Francisco Convention Bureau, the
municipal authorities who have charge of the
auditoriums in the Civic Center, and the hotel
managements, is taking active steps to arrange for
all needed facilities of the 1946 A.M.A. meetings
in San Francisco.

Already the hotel managements have gone on
written record, stating they will place some 3,000
rooms at the disposal of the convention authori-
ties. The City authorities are coöperating to make
available the number of auditoriums, section meet-
ing rooms and exhibit spaces that will be needed.

In due course, the time of the A.M.A. Annual
Session will be determined by the A.M.A.
Trustees.

Newspaper dispatches of September 6, show-
ing President Truman wearing a Shrine fez, in-
dicate that the Mystic Shrine is also arranging
for its next national conference in San Francisco.
If transportation facilities can be made available
to a fraternal and social organization for a large
gathering in San Francisco next year, certainly
it would appear that a scientific society such as
the American Medical Association, many of
whose members are still in military service, should
be permitted to have transportation accommoda-
tions to meetings at which topics of much value
and interest in military and civil medicine will be
discussed.

Particularly should such permission be granted

as an expression of appreciation to the more than fifty thousand medical officers in Army, Navy, and Air Forces, whose ability and ministrations have made possible the excellent morbidity and mortality rates in World War II, and through whose care the lives of thousands of Americans have been saved.

Unless very good reasons arise for other action, the California Medical Association is holding that the A.M.A. Session will convene in San Francisco, some time during the year 1946.

Apropos of the above, the C.M.A. Council at its 328th meeting on August 12 took action as indicated in the following minute of proceedings:

A.M.A. Meeting in San Francisco in 1948:

Discussion was had concerning the meeting of the American Medical Association which, by vote of the A.M.A. House of Delegates, is scheduled to be held in San Francisco some time during the year 1946. Because of war and transportation conditions, it was deemed advisable to give instructions to the C.M.A. delegates who would represent the California Medical Association at the next meeting of the House of Delegates of the American Medical Association.

On motion made and seconded, the following resolution, to be sent to the Trustees of the American Medical Association and to the House of Delegates of the American Medical Association, was approved:

WHEREAS, The House of Delegates of the American Medical Association in previous annual sessions voted to hold an annual session of the American Medical Association in San Francisco in the year 1943, that decision, because of transportation difficulties incident to World War II, being changed by the A.M.A. Trustees; and

WHEREAS, The A.M.A. House of Delegates subsequently voted that the 1946 annual session of the American Medical Association should be held in San Francisco; and

WHEREAS, Existing transportation difficulties, if war continues, make it more than probable that the A.M.A. Trustees may again be called upon to waive the said decision for the A.M.A. meeting in San Francisco in 1946; and

WHEREAS, The 1947 meeting of the American Medical Association will be held in Atlantic City, the year 1947 being the 100th anniversary of the founding of the American Medical Association; and

WHEREAS, It would be proper that the twice-made decision of the House of Delegates to hold an annual session of the American Medical Association in San Francisco be reaffirmed; now therefore be it

Resolved, That the Council of the California Medical Association respectively petitions the Trustees of the American Medical Association and the House of Delegates of the American Medical Association to vote to hold the 1948 annual session of the American Medical Association in the City of San Francisco, (if continuation of World War II makes a meeting in San Francisco in year 1946 impossible); and be it further

Resolved, That copies of these resolutions be sent to the Secretary of the American Medical Association for transmittal respectively to the Trustees of the A.M.A. and the House of Delegates of the A.M.A.; and be it further

Resolved, That the eight delegates representing the California Medical Association in the House of Delegates of the American Medical Association be instructed to make the proper presentation to the A.M.A. Trustees and to the A.M.A. House of Delegates.

And here the matter rests at date of this writing.

California Medical Association Will Hold Its 75th Annual Session in Los Angeles in Year 1946.—At this year's annual session of the California Medical Association, held in May last, its House of Delegates accepted the Council's recommendation that next year's annual meetings be held in Los Angeles. Days of the conference (whether for a two, three or four day ses-

sion) will be decided by the Council at a later date. The dates of meetings will depend somewhat upon the time of meeting of the American Medical Association. The C.M.A. Council will aim to arrange the dates in a manner to promote the interests of the national as well as the state gatherings.

In the meantime, members of the California Medical Association,—and this applies to members in military as well as those in civilian practice—are cordially invited to send suggestions of topics for scientific programs for C.M.A.'s thirteen scientific sections, or to submit to section officers, either through Section Secretaries, or through the Association Secretary (who is the chairman of the Committee on Scientific Work), titles of papers covering work or subjects in which they may have special interest. If such co-operation is given, assurance of good scientific programs may be guaranteed. The roster of officers of scientific sections, with addresses, appears in CALIFORNIA AND WESTERN MEDICINE, every second month or so, usually in the front section on page 4. Members who are in position to participate in next year's annual session program should write promptly to the Secretary of the proper Section.

In due time, additional information will be given concerning the A.M.A. and C.M.A. annual sessions of 1946.

ON POSTWAR EDUCATIONAL FACILITIES FOR MILITARY COLLEAGUES

Problems Confronting Military Colleagues on Their Return to Civil Practice.—Now that VE and VJ days have come and gone, many physicians who are among the 60,000 or so who are in service with the Armed Forces are giving serious thought to plans on what they will do when they are released from military duty.

Older physicians, nearly all of whom have family dependents and responsibilities will naturally wish to reestablish themselves as promptly as possible in either the community in which they practiced before entering the Army or Navy, or perhaps in some newer or more rapidly growing district. Of these, nearly all, provided adequate educational facilities are made conveniently available, would prefer to take short or longer refresher or similar courses dealing with medicine, surgery, pediatrics, obstetrics and allied branches.

The four Class A medical schools of California—University of California Medical School, Stanford University School of Medicine, University of Southern California School of Medicine, and College of Medical Evangelists, have here a definite responsibility, since many of the 2,000 military members of the California Medical Association will instinctively turn first to these institutions to ask what postwar refresher or other courses are being offered, particularly for general practitioners. The hope is expressed that the executive boards of the four California Medical Schools will carry on conferences through which

plans will be put in operation that will permit a considerable choice of work.

Older military colleagues who may be thinking of limiting their professional work to one of the specialties will probably seek facilities for such training in Eastern Medical Centers.

For younger physicians, whose professional training as interns or residents may have been interrupted by induction into military service, the accredited and approved hospitals located in California and other States will probably present good opportunities for continuation of general or special training.

Physicians in military service who contemplate refresher, special, or other courses will find much information in the special numbers of the *Journal of the American Medical Association* (Index, Hospital, State Board and Educational numbers. Also, *J.A.M.A.* issue of July 7, 1945, on page 751).

In the *J.A.M.A.* issue of September 1, 1945, excellent articles of informative nature appear: Educational Facilities for Physician Veterans, p. 28; Plan in North Carolina, p. 33; Review and Refresher Courses, p. 34, and others. Valuable time will be saved through perusal of the up-to-date information therein presented. Medical officers who contemplate refresher, continuation, or courses in the specialties, or internships or residencies should not fail to secure a copy of this issue which, if not otherwise available, may be had for loan by writing to one or more of the three medical libraries in California, addresses of which are given on page 5 in the front section of each issue of *CALIFORNIA AND WESTERN MEDICINE*.

Concerning the G. I. Bill of Rights in relation to medical officers, an excerpt from Dean Wilburt C. Davidson's article in *J.A.M.A.*, for September 1, 1945, on page 33, is here given:

All veterans, regardless of the age at which they entered the service and whether or not they had been in practice, are eligible under the G. I. Bill of Rights for a retraining course of one year at any institution approved by the Veterans Administration, which will pay fees to the institution up to \$500 per year and a subsistence allowance of \$50 monthly to the veteran; \$75 if he has a dependent. On completion of this one year course, veterans who entered the service under 25 years of age and those, regardless of age, who can show that their training was impeded or interrupted by their entrance into the service also are entitled to additional training of the same number of months they have been in the service. In other words, a medical officer who has been in the armed forces for thirty months and entered the service at the age of 25 years or, regardless of age, had been an intern or resident but had not completed his resident training is eligible for three and one-half years of postwar training, i.e., one year, plus thirty months.

The central office of the California Medical Association, 450 Sutter, San Francisco (8), will be happy to render possible service to C.M.A. members and others who seek additional information.

We have room in this country for but one flag, the Stars and Stripes. . . . We have room for but one loyalty, loyalty to the United States. . . . We have room for but one language, the English language.

—Theodore Roosevelt, *The Great Adventure*. Also last message to the American Defense Society, 3 January, 1919, two days before his death.

BENEVOLENCE FUNDS TO AID IN CARE OF NEEDY PHYSICIANS AND THEIR DEPENDENTS: WHAT CALIFORNIA MEDICAL ASSOCIATION AND LOS ANGELES COUNTY MEDICAL ASSOCIATION ARE DOING

C.M.A. Physicians' Benevolence Fund.—

Again and again, worthwhile objectives must bide their time before getting a start on the road to real fulfillment. Of such may be mentioned endeavors to formulate plans for, and to set up actively working organizations, through which elderly physicians who have met with financial or other reverses could receive aid from members of their profession, thus making possible at least a partial alleviation in their distress and sufferings.

Over many years, the proceedings of constituted authorities of a goodly number of state and component county medical societies have outlined plans for benevolent purposes, but the well meant endeavors only too often have not gotten beyond the laudable resolutions dealing with the subject.

It is gratifying, therefore, to call attention to the progress that has been made during the last few years by the California and Los Angeles Medical Associations, in developing their own benevolent activities.

First, some comments may be in order concerning the "Physicians' Benevolence Fund of the California Medical Association" (referred to in C.M.A. Constitution under Article XI, Section 1, and in By-laws in Chapter V, Section 23). That C.M.A. fund on December 31, 1944, as per Treasurer's report in April, 1945 *CALIFORNIA AND WESTERN MEDICINE*, p. 208, was credited with assets of \$13,945.38; and each year, as provided in the C.M.A. Constitution:

At least \$1.00 out of the annual dues paid by each member of the Association shall be allocated to the Physicians' Benevolence Fund and shall only be used for the purposes as set forth in the By-Laws.

At the 328th meeting of the C.M.A. Council, held on August 12, 1945, report was made by the C.M.A. Physicians' Benevolence Committee as follows:

C.M.A. Physicians' Benevolence Committee:

Councillor Axel E. Anderson, Chairman of the C.M.A. Physicians' Benevolence Committee, made report concerning the work of the committee, with special reference to the conditions in Los Angeles County, where some 93 individuals receive aid, more than one-half being widows of physicians. In Los Angeles, with the aid of the Los Angeles County Medical Association, the monthly outlay is something like \$800. After discussion, the Council voted to approve the committee's recommendation that the allocation to Los Angeles County from the C.M.A. Benevolence Fund be increased from \$300 to \$500 per month.

Chairman Anderson also called attention to the campaign which had been inaugurated by the Los Angeles County Medical Association to build up an independent Benevolence Fund, stating that to date in that county the sum of \$150,000 had been secured for such objective, the campaign to raise a fund of \$500,000 for that county still going on.

The efforts to establish the Physicians' Benevolence Fund of the California Medical Association began in the annual session held at Del Monte, in May, 1939 (Resolution No. 11), being followed

through with adoption of a proper By-Law at the 37th annual meeting of the House of Delegates in May, 1940, held at Coronado. The original committee consisting of Doctor A. E. Anderson, of Fresno, Chairman, with Doctors Elizabeth M. Hohl, Los Angeles, and Doctor Robert A. Peers, of Colfax, continues to supervise the C.M.A. benevolence work.

* * *

"Physicians' Aid Association of the Los Angeles County Medical Association."—Such is the name of the nonprofit corporation, sponsored by the Los Angeles County Medical Association, and organized under California law. This organization is the successor of a special committee of that component county unit that started its active work in 1937. It is chartered as a nonprofit corporation under date of March 14, 1940. Its voting membership is limited to those members of the Los Angeles County Medical Association who contribute to its maintenance (Annual Membership at \$5.00 per year; Life Membership through a payment of \$50.00; Benefactor Membership through a payment of \$100.00; and Special Benefactor, through a payment of \$1,000.00 or more). During the last two years this subsidiary of the Los Angeles County Medical Association has been able to collect more than \$150,000.00 in cash toward the attainment of its goal of a fund of \$500,000.00. Truly, a laudable ambition and a commendable accomplishment to date.

It is questionable whether the benevolent projects initiated elsewhere in the past (Pennsylvania, New York, Illinois) can present a better record for so brief a period. The endeavors to bring into existence the sum of \$500,000.00 are still being actively promoted in Los Angeles, and much credit is due the officers of the Los Angeles County Medical Association and the nonprofit corporation for the excellent results thus far achieved.

Contributions have been received from others than physicians, the Woman's Auxiliary to the Los Angeles County Medical Association having donated \$3,722.93. Druggists, Medical Building Corporations, Insurance Groups, and Individuals have all made donations to the Physicians' Aid Association.

It is of interest to note that the U. S. Commissioner of Internal Revenue has included the Los Angeles County Physicians' Aid Association in the listing of organizations, whereby those who give to the accepted organizations are permitted to deduct such gifts from the Donor's income in the computation of Federal Income Tax. Thus, if a physician found himself in the 50 per cent tax bracket and gave \$1,000 to the Los Angeles Physicians' Aid Association, he would be permitted to deduct \$500.00.

* * *

Bequest Forms of the California and Los Angeles Benevolence Funds.—Several years ago, CALIFORNIA AND WESTERN MEDICINE, from time to time printed some legal forms to serve as

suggestive guides for any physicians who might desire to leave bequests to the C.M.A. Benevolence Fund. The same forms would be applicable to the Los Angeles County Physicians' Aid Association through insertion of that name. These forms are here inserted to complete these comments, the hope being expressed that members of the California Medical Association who may have been blessed with ample financial resources may wish to add to their happiness on earth by setting aside certain sums or properties to aid in carrying on the commendable activities above discussed. What better monument than to leave one's name on record for those who are yet to come, than through such a contribution to our beloved profession and to worthy disciples and their dependents, who may have met with misfortune?

* * *

(A) Bequest Forms for the "Physicians' Benevolence Fund of the California Medical Association"

Form of Clause of Will Providing for Cash Bequest

I hereby give and bequeath unto Trustees of the California Medical Association, a nonprofit corporation of California, the sum of \$_____ for the use and benefit of the Physicians' Benevolence Fund of the California Medical Association.

* * *

Form of Clause of Will Providing for Cash Bequest

I hereby give and bequeath unto Trustees of the California Medical Association, a nonprofit corporation of California, the sum of \$_____, the principal whereof shall from time to time be invested to the best advantage compatible with safety, and the income whereof shall be paid to and become a part— of the Physicians' Benevolence Fund of the California Medical Association as said fund is established and maintained by said Association.

* * *

Form of Clause of Will Providing for Bequest of Personal Property

I hereby give and bequeath unto the Trustees of the California Medical Association, a nonprofit corporation of California (here describe the property), the same or the proceeds thereof to be expended by said corporation for the benefit and as a part of the Physicians' Benevolence Fund of the California Medical Association. The said corporation shall have the power to sell said property and to invest and reinvest the proceeds arising from the sale thereof from time to time as it may deem advisable for the purpose of producing as large an income as may be compatible with safety.

* * *

Form of Clause of Will Providing for Devise of Real Property

I hereby give and devise unto Trustees of the California Medical Association, a nonprofit corporation of California, for the use and benefit of the Physicians' Benevolence Fund of the California Medical Association the following described real property situate in the County of _____ State of California, and more particularly described as follows, to-wit:

* * *

Form of Clause of Will Providing for Devise of Real Property

I hereby give and devise unto Trustees of the California Medical Association, a nonprofit corporation of California (here describe the property), the same or the proceeds thereof to be held as a part of the Physicians' Benevolence Fund of the California Medical Association, the income whereof shall be used for the purposes of said fund as it is established and maintained by the California Medical Association. The said corporation shall have the power to sell said property and to invest and reinvest the proceeds arising from the sale thereof from time to time as it may deem advisable for the purpose of producing as large an income as may be compatible with safety.

(B) Bequest Forms for the "Los Angeles County Physicians' Aid Association"

Excerpts from By-Laws of Aid Association of Los Angeles County Medical Association follows:

ARTICLE XI

Forms of Bequest

Section 1. Form of a Devise.

I, _____ of _____ do hereby devise and bequeath to the Los Angeles County Physicians' Aid Association, their successors and assigns, all that—

(Here recite the real estate from the deed)

Section 2. Form of a Donation or Bequest.

I, _____ of _____ hereby give and bequeath unto the Los Angeles County Physicians' Aid Association the sum of—

Note—By the laws of California all bequests of a charitable character must be made at least one calendar month before the death of the donor, and the will must be attested by two disinterested witnesses.

WHY DID P.T.A. SUPPORT COMPULSORY HEALTH INSURANCE?*

Misguided efforts to lift the lid on the Pandora's box of state medicine have too frequently been abetted by sincere, worthwhile organizations. More than one prominent group laudably interested in better health care, but unaware of the many dangers to sound medical progress involved, has succumbed to glib suggestions that compulsory health insurance is the panacea for all ills.

A case in point is the California Congress of Parents and Teachers. No California organization has a more distinguished record of solid achievement in its own field. No one questions its wisdom, its competence or its high aims in striving for educational progress. But Parent-Teacher advocacy of compulsory health insurance at the 1945 Legislature marked a radical change in P.T.A. program, something foreign to its traditional purposes.

It is obvious that the P.T.A. must concern itself with the health of California's school children. Its success in meeting this responsibility is amply demonstrated by the well-baby clinics, health roundups and dental inspections developed in full cooperation with medical and allied services. But just how the organization spanned the gap between child health care and endorsement of socialized medicine is shrouded in obscurity.

Published statements do little to dispel the uncertainty. The president of the P.T.A. Congress, in a letter recently addressed to a San Francisco newspaper, declared, "The Congress feels that the child has a right to medical and dental care and periodic check-ups on his general health until he is old enough to take care of himself." Such statements ring pleasantly in the ears of parents and the public, because everyone knows more medical attention would be good for every child. However, they ignore the fact that state medicine could not of itself produce more care for children or anyone else.

Again in the words of the P.T.A.: "Unless parents are compelled by law to give their children regular medical and dental care, vast numbers of childhood ailments, such as defective

sight, hearing, poor posture, low nutrition, bad tonsils, huge adenoids, defective teeth, rheumatic fever, TB tendencies and other ills, will continue to haunt the path of childhood!" There's something stupendous about the long list of ailments which compulsory health insurance is expected to cure or allay—but the old fallacy that bureaucratic medicine will mean perfect health for everyone is still apparent.

The P.T.A. adds a new note, though, which has some nice goose-stepping possibilities. *Compel the patient to go to the doctor!* Not even the most ingenious drafter of a health insurance bill as yet has tried that idea in any scheme. At worst, he has stopped with the attempt to cajole, coerce or bully medicine into providing regimented service, and to tax wage-earners for the privilege of standing in line in front of doctors' offices.

That any important civic organization could earnestly support compulsory health insurance, as the P.T.A. president maintains, solely for the reasons quoted, is evidence enough that medicine is perilously close to losing its battle to survive as a profession. The challenge is unmistakable.

EDITORIAL COMMENT†

NUTRITIONAL CONTROL OF CANCER

About ten years ago it was suggested by Brody¹ of the University of Missouri that the increased incidence of cancer during recent decades is due to the over-nutrition and under-exercise characteristic of modern civilization. Tannenbaum² confirmed this hypothesis. He found that in both man and animals there is a positive correlation between the incidence of cancer and body weight, and suggested that the establishment and maintenance of lower average weight levels is worthy of trial in the prevention of human cancer.

Experimental tests of this method were made by Rusch³ and Potter⁴ of the McCordle Memorial Laboratory for Cancer Research, University of Wisconsin. In a typical experiment 192 young adult mice received exactly the same amount of protein, salts and vitamins. Half of them were given a high carbohydrate supplement. The total diet of this group was 9.6 calories per day. This is 50 per cent more than is required to maintain weight. The other half of the mice were given only a sufficient supplement to maintain body weight, their total food intake being 6.4 calories per day. All mice received a standard minimal dose of cancer-producing ultraviolet light for 30 minutes every other day. By the end of 9 months 88 per cent of the high-caloric group had developed cancer. There was only a 2 per cent incidence of cancer in the low-caloric group.

The low-caloric mice received a great deal of

† This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comments by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California Medical Association to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

* A contributed article.

exercise, since they were constantly in motion. The high-caloric mice received almost no exercise and were quite indolent. From these and other data Potter concluded that when animals are placed under conditions analogous to those of modern civilized man the incidence of cancer is increased. He believes that this is a definite guide to the prevention of cancer in man. He emphasizes, however, that restrictions in the quantity of food eaten requires that the quality of the food be carefully controlled.

This conclusion is challenged by Morris⁵ of the National Cancer Institute, Bethesda, Md., who has collected and summarized all pertinent data reported by earlier investigators. All of the experiments summarized by him were made on pure strain mice whose average normal percentage of spontaneous mammary cancer varied from 36 to 80 per cent with different strains. The type of underfeeding was usually a one-third to one-half reduction in total food or caloric intake, or a similar reduction in certain essential food elements, such as lysine or cystine. Under these food deficiencies the percentage of spontaneous mammary cancer was reduced on an average to from 3 to 18 per cent for the different strains.

The mice selected were usually young adults. Under adequate control feeding these mice increased from 50 to 100 per cent in body weight during the course of the experiment (18 to 28 months.) In the deficiency groups the body weight usually decreased as much as 25 to 45 per cent before the end of the experiment. In many mice the deficiency diet resulted in a complete absence of estrus and atrophy or infantilism of the mammary glands, to which the reduced incidence of cancer was presumably due. Morris concludes that dietary regimens thus far known or assumed to inhibit or delay carcinoma development in animals are too drastic to be of practical value as a means of preventing human cancer.

The rôle of exercise upon cancer development was studied by Kline and Rusch.⁶ They report that forced exercise slows the rate of growth of transplanted sarcoma in mice. Morris regarded this conclusion as unwarranted due to the concomitant lowered food intake of the exercised animals.

In Morris' opinion no broad generalization as to the effect of nutrition or exercise in the prevention of human cancer should be made at this time.

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Sometimes people call me an idealist. Well, that is the way I know I am an American. America is the only idealistic nation in the world.

—Woodrow Wilson, *Speech*, Sioux Falls, S. D., 8 Sept., 1919.

NUTRITIONAL VALUE OF SUNFLOWER SEED

In search for new food materials of significant value in human and animal nutrition, Day and Levin¹ of the Department of Chemistry, Indiana University, made quantitative studies of the relative nutritional value (vitamin content) of sunflower seed meal, as compared with similar products from wheat, corn, and soybeans. Since there is marked vitamin destruction by the severe heat treatment incidental to pressure extraction of sunflower seed oil, Day and Levin limited their tests to sunflower seed meal resulting from low temperature solvent extraction. Weanling rats were divided into different groups with due regard to litter membership, sex and weight. Each group was fed the same basic ration plus 5 to 10 per cent of the product to be tested, this product being the sole source of vitamin B complex. The supplements were: defatted wheat-germ meal, defatted corn-germ meal, defatted sunflower seed meal, defatted soybean meal, and Brewer's yeast (control). The growth rate was least rapid with soybean meal. The 5 per cent soybean group gained in weight an average of but 21 grams per rat by the end of 7 weeks. Wheat germ and corn germ meals gave an average gain of 46.5 grams per rat. Sunflower seed meal was superior to both wheat and corn germ meal (three times superior to soybean meal), giving an average gain in weight of 56 grams per rat by the end of the same period of time. By the end of 14 weeks, the average gain was 70 grams per rat with 5 per cent wheat and corn germ meals and 70 per cent greater, or 119 grams per rat, with the sunflower seed meal. Day describes the sunflower seed meal as a light gray palatable powder (53 per cent protein) which can be satisfactorily blended with wheat flour or corn meal to make appetizing baked foods. Its high nutritional properties (vitamin content) suggests that sunflower seed may be of much more practical value in human nutrition than hitherto assumed.

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Jacksonian Epilepsy.—The present-day conception of epilepsy is based on the studies of John Hughlings Jackson, unilateral or Jacksonian epilepsy having been described in 1875. It may likewise be said that there remains little to be added today to the observations Jackson made upon the subject of eyesight and tabes. Among other valuable studies there was the one on aphasia in 1864; and in 1898 he originated the doctrine of "levels" in the nervous system.—Warner's *Calendar of Medical History*.

There can be no fifty-fifty Americanism in this country. There is room here for only 100 per cent Americanism, only for those who are Americans and nothing else.

—Theodore Roosevelt, *Speech*, Republican Convention, Saratoga.

ORIGINAL ARTICLES

Scientific and General

RECENT OBSERVATIONS ON VIRUS PNEUMONIA*

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WHEN the etiology of the group of diseases called virus pneumonia was discussed before the California Medical Association three years ago¹ a causative virus was demonstrable in not more than 10 per cent of cases. Since then a new virus, which is believed to be the etiologic agent in the prevalent form of primary atypical pneumonia, has been isolated,² and several other agents have been described as possibly associated with pneumonia in man, among them two viruses causing pneumonia in cats,^{3,4} an agent infectious for guinea pigs,⁵ and an indifferent streptococcus.⁶ It is not possible to evaluate, on the basis of present evidence, the importance of the latter agents as a primary cause of pneumonia in man, and time does not permit a detailed discussion of the claims advanced for them by the various investigators.

CLASSIFICATION

A preliminary classification of virus pneumonias based on etiology is presented in Table 1. Those most thoroughly studied include primary atypical pneumonia caused by a virus transmitted in our laboratory to chick embryos, cotton rats, and hamsters, virus pneumonias caused by the psittacosis group of agents, and influenzal pneumonias due to influenza virus type A or B. There are important epidemiological and clinical differences between these three diseases.

Evidence to be presented later indicates that about 60 per cent of the cases of virus pneumonia are caused by the new virus. It is suggested that the term "primary atypical pneumonia" be reserved for this prevalent form of the disease or etiologic entity caused by a single virus. The diagnosis of psittacosis virus pneumonia, influenza virus pneumonia, or bronchopneumonia of unknown etiology should be applied to distinguish these diseases from primary atypical pneumonia. The disease called primary atypical pneumonia may occur as sporadic cases, in family or institutional outbreaks, or as small epidemics. Presumably the agent is transmitted from person to person by contact or droplet infection, as no reservoir other than man has been found. Primary atypical pneumonia is usually a mild illness, although severe or fatal cases are sometimes caused by the same virus. The mortality is generally stated to be less than 1 per cent.

Viruses of the psittacosis group are distinct from the agent which causes primary atypical pneumonia and are responsible for only a small proportion, probably less than 10 per cent, of all cases of virus pneumonia.¹ The psittacosis-like viruses are carried by birds of the parrot family, chickens, and pigeons, and have also been found in cats, mice, and ferrets. Pneumonia of the psittacosis group is usually produced in man by inhalation of the dried excreta of birds or by contact with infected tissues. Transmission from human cases is relatively rare, but may occur in nursing contacts. The disease is more severe than the prevalent form of atypical pneumonia, and the

case fatality is high. The virus is quite readily isolated from the sputum or lung tissue by direct inoculation of mice or cotton rats.

The term "influenzal pneumonia" includes not only all degrees of pulmonary involvement from mild bronchitis to severe fulminating pneumonia caused by type A or B influenza virus, but also secondary bacterial pneumonias following influenza. This disease occurs only during influenza epidemics. The influenza virus has never been isolated from sporadic cases of virus pneumonia. The case fatality is variable, depending in part on the virulence of the virus causing the epidemic, but in recent years the mortality among patients with influenzal pneumonia can be placed with some certainty below 10 per cent.

The virus of lymphocytic choriomeningitis and the rickettsiae of Q-fever are known to produce a disease which sometimes resembles virus pneumonia,^{7,8} but there is at present no evidence that these agents cause many cases of this illness. In 30 per cent or more of patients with the clinical signs and symptoms of virus pneumonia no etiologic agent has been demonstrated. Possibly some of these illnesses are bronchopneumonias caused by bacteria, and it should be remembered that in the early phases of coccidioidomycosis a disease resembling primary atypical pneumonia may occur. It is also possible that some of the other viruses which have been described may cause these pneumonias, which are at present of unknown etiology.

ETIOLOGY OF PRIMARY ATYPICAL PNEUMONIA

Isolation of virus.—Two methods of isolating the causative virus of the prevalent form of atypical pneumonia are outlined in Table 2. The "orthodox" method shown in the upper part of the table was unsuccessful. Although definite pulmonary lesions were obtained in cotton rats and hamsters after primary intranasal inoculation of sputum, only small or irregular lesions or none at all appeared on further passage. In certain series, lesions were obtained consistently in the later passages, indicating an adaptation of the virus, but these differed grossly and microscopically from the pulmonary infiltration obtained with the original sputum. The agent producing these lesions was not neutralizable by human convalescent serum, and further investigation showed that the lesions were probably due to a contaminating virus from the cotton rats. A new procedure, as shown in the lower part of Table 2, was then adopted and this method was more successful for isolation of the virus. Suspensions of sputums were filtered through bacteria-retaining collodion membranes, and the sterile filtrates were inoculated into the amnion of 12-day-old chick embryos. On serial passage in chick embryos adaptation of the virus from human material was accomplished in 5 of 10 trials. One strain was isolated from a bacteriologically sterile sample of human lung. As the chick embryos showed little significant pathology it was necessary to inoculate hamsters and cotton rats intranasally with the chick embryo material to demonstrate the presence of the virus. This procedure produced in 25 to 75 per cent of the animals pulmonary lesions which appeared, on gross and microscopic examination, to be almost identical with those resulting from inoculation of sputum.

Serological reactions.—Clinical and laboratory data on four cases of atypical pneumonia are presented in Table 3. These cases were relatively mild, and the white blood cell counts were normal or low. Two cotton rats inoculated with sputum from patients 1 and 2 respectively, both developed pulmonary lesions; and lesions were found in one of four animals inoculated with sputum from the fourth patient.

In a certain proportion of cases of primary atypical

* Read before the Section on Public Health, at the Seventy-fourth Annual Session of the California Medical Association, Los Angeles, May 6-7, 1945.

From the Research Laboratory of the California State Department of Public Health.

TABLE 1.—Classification of Virus Pneumonias

	Estimated proportion of all cases	Epidemicity	Source	Clinical course	Case fatality	Virus isolation in
	Per Cent				Per Cent	
Primary atypical	60	sporadic or epidemic	man	usually mild	less than 1	chick embryos cotton rats hamsters
Psittacosis group	<10	usually sporadic	birds	very severe	over 20	mice cotton rats
Influenza A or B	<10	epidemic	man	moderately severe	less than 10	chick embryos ferrets hamsters
Lymph. chorio-meningitis	?	sporadic	rodents	severe	—	guinea pigs mice
Q-fever	?	—	ticks	moderately severe	about 5*	guinea pigs
Unknown etiology	30	sporadic ?epidemic	(resemble other virus pneumonias)			—

* Based on 15 laboratory infections at the National Institute of Health.⁸

TABLE 2.—Methods of Isolating the Virus of Atypical Pneumonia

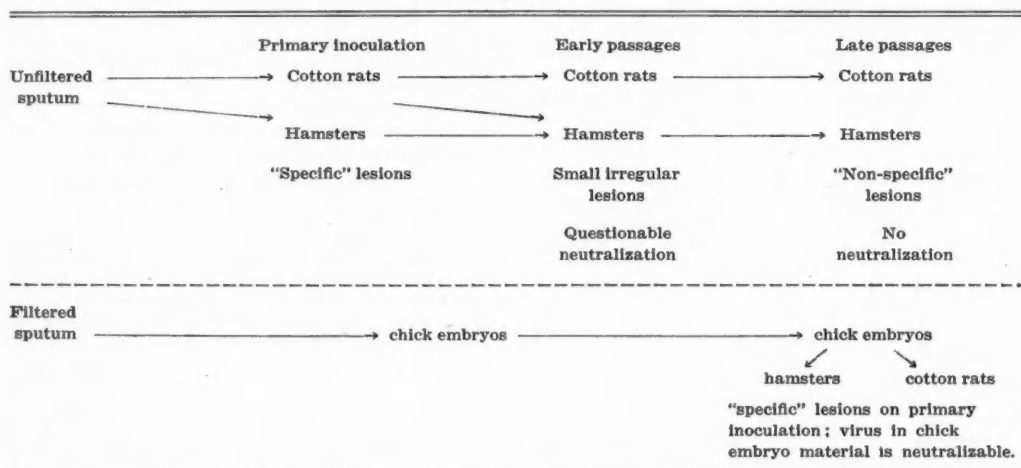


TABLE 3.—Clinical and Laboratory Data in Four Mild Cases of Primary Atypical Pneumonia

	Fever maximum duration	Pulmonary lesion	Day of illness	White blood cell count	Sputum (cotton rat)	Serological titers		
						Cold agglutination	Streptococcal agglutination	Neutralization
Ir	104. 9 days	RLL	4	5,800	2/2	—	0	<2
			32	9,600	—	—	10	8
			92	—	—	—	0	4
Sn	104. 10 days	RLL	4	4,950	2/2	10	0	4
			8	—	—	80	0	8
			14	—	—	320	0	16
So	102. 8 days	LLL (min.)	5	11,800	—	20	—	<2
			10	8,200	—	320	0	8
			17	—	—	160	0	32
			25	—	—	80	0	32
McN	101. 7 days	RUL	3	7,500	1/4	10	0	4
			17	10,400	—	10	0	128

pneumonia the serum develops between the 10th and 20th day the property of agglutinating type O human erythrocytes at low temperatures.⁹ This cold agglutination reaction disappears in the patient after convalescence and also after storage of the serum itself for periods of a month or more. Cold agglutination has been observed in other diseases, and we have found it in three cases of influenzal pneumonia. Although this reaction is not entirely specific for primary atypical pneumonia, the presence of the cold agglutinins in titers above 20 asso-

ciated with pneumonia offers a simple presumptive diagnostic test for the disease.

Virus neutralization tests were performed by mixing 20 per cent suspensions of infected chick embryo tissues with dilutions of human serum in normal horse serum, incubating at 20 degrees centigrade for 20 minutes, and inoculating hamsters or cotton rats intranasally. In cases of primary atypical pneumonia the titers of the serums taken early in the disease were low, and an increase in antibodies to high titers was observed during con-

TABLE 4.—Clinical and Laboratory Data in Three Relatively Severe Cases of Primary Atypical Pneumonia

	Fever maximum duration	Pulmonary lesion	Day of illness	White blood cell count	Sputum (cotton rat)	Serological titers		
						Cold agglutination	Streptococcal agglutination	Neutralization
Bu	104.8 24 days	RLL	4	7,500	2/7	10	0	<2
		RUL	12-15	37,600	1/2	80	—	<16
		LLL	25-30	9,200	—	160	0	16
Yo	104. 9 days	LUL	46	—	—	20	—	<4
		RUL	4-8	7,650	7/12	8	—	<2
		RLL	16	7,800	—	1024	—	>16
Do	101.8 16 days	LLL	26	—	—	320	40	64
			80	—	—	160	20	64
			5	10,000	—	10	0	<4
			11	7,900	—	40	10	8
			16	—	—	160	20	8
			25	—	—	160	—	16

TABLE 5.—Results of Neutralization Tests with the Virus of Atypical Pneumonia

	Antibody increase by virus neutralization		
	fourfold or over	twofold	none
Atypical pneumonia	12	4	1
Streptococcal agglutination positive			
Atypical pneumonia	19	6	8
Streptococcal agglutination negative			
Total atypical pneumonia (50)	31 (62%)	10 (20%)	9 (18%)
Other pneumonias (14)	0	1 (7%)	13 (93%)
Bacterial and Influenzal			

TABLE 6.—Laboratory Differentiation of Primary Atypical Pneumonia from Virus Pneumonias of Psittacosis Group

Case No.	Virus isolated sputum	Serum days after onset	Complement fixation psittacosis group	Neutralization virus of atypical pneumonia	Streptococcal agglutination	Cold agglutination
1	Atypical pneumonia	4	0	<2	0	0
		25	0	<16	0	160
2	Atypical pneumonia	4	—	<2	—	0
		25	4	<64	40	640
3	—	5	0	<2	0	10
		17	0	8	80	80
4	—	6	0	0	0	0
		30	32	0	0	0
5	Psittacosis group	1	0	4	—	—
		30	32	4	0	—
6	Psittacosis group	Pre-21	4	—	—	—
			32	0	0	—

valescence. The antibodies had decreased or disappeared at periods of several months to two years after the illness. The neutralization was found to be specific in that no increase in antibodies was observed when serums from persons with atypical pneumonia were tested against influenza or rodent pneumonia viruses, and serums from human cases of psittacosis, influenza, or bacterial pneumonia showed no significant increase in antibodies against the atypical pneumonia virus. The occurrence of these neutralization reactions is good evidence for an etiologic connection between the virus isolated in the laboratory and primary atypical pneumonia in man.

Three cases of greater severity are shown in Table 4. Serums from certain cases of atypical pneumonia develop agglutinins for an indifferent streptococcus isolated by Thomas and his associates at the Rockefeller Institute Hospital⁶ from a fatal case. The relation of this organism to the disease is at present uncertain, but the observations that the lungs in certain fatal cases are bacteriologically sterile^{2,10} and that atypical pneumonia may be produced in man with bacteria-free filtrates of throat washings or sputum¹¹ seem to exclude the streptococcus as the primary cause. This organism might in some cases produce secondary infection and a more severe illness.

The results of neutralization and streptococcal agglu-

tination tests on 50 patients with a clinical diagnosis of primary atypical pneumonia are summarized in Table 5. Thirty-one, or 62 per cent, of the patients had definite increases in virus-neutralizing antibodies for the new virus of atypical pneumonia; and of these, 12 also showed positive agglutination of the indifferent streptococcus. If the streptococcus were the primary cause of atypical pneumonia we should expect to find streptococcal agglutination without virus neutralization in these cases. Of the 9 patients who had no increase in neutralizing antibodies, only one had streptococcal agglutinins. In 14 patients with bacterial or type A influenzal pneumonia no significant change in neutralization titer was found.

In another series of 87 patients, cold agglutinins were found in about 70 per cent, and among those with cold agglutinins the streptococcal agglutination was positive in 60 per cent. Only 3 patients had streptococcal agglutinins in the absence of cold agglutinins.¹² This suggests that streptococcal agglutinins and cold agglutinins tend to occur in parallel. The serological reactions with the indifferent streptococcus are somewhat analogous to the Weil-Felix reaction with certain strains of proteus bacilli in rickettsial diseases.

DIFFERENTIATION OF PSITTACOSIS FROM PRIMARY ATYPICAL PNEUMONIA

The differentiation of virus pneumonia of the psittac-

osis group from the severe form of primary atypical pneumonia is important on clinical and epidemiological grounds, and this can be done by laboratory tests as illustrated in Table 6. In the first three cases the causative agent was the virus of atypical pneumonia and this was isolated from the sputum of two patients. These patients showed no significant complement-fixation titer with the psittacosis-group antigen, but neutralizing antibodies for the virus of atypical pneumonia, cold agglutinins, and streptococcal agglutinins appeared in the sera during convalescence. In the three other cases a virus of the psittacosis group was the causative agent as judged from the presence of this virus in the sputum and the appearance of complement-fixing antibodies in the serum. No significant titers of neutralizing antibodies for the virus of atypical pneumonia, no cold agglutinins, or no streptococcal agglutinins were found in these patients.

Because of the widespread infection of pigeons with the psittacosis group of viruses, outbreaks of atypical pneumonia have often been diagnosed as ornithosis or psittacosis on rather unsound evidence. In one outbreak which came to our attention¹⁵ a flock of pigeons was associated with many of the cases and the virus of ornithosis was demonstrated in the birds. The human contacts, however, gave no significant serological reactions for the psittacosis group, and most of them had definite increases in neutralizing antibodies for the unrelated virus of atypical pneumonia. Although the epidemiological evidence tended to incriminate the pigeons, the laboratory findings indicated that the causative agent in these cases was entirely distinct from the psittacosis group. It would seem, therefore, as regards patients with virus pneumonia who have been in contact with infected pigeons or other birds a diagnosis of ornithosis or psittacosis cannot be made with certainty unless the same strain of virus is isolated not only from the birds, but also from the sputum of the patient, or definite increases in psittacosis complement-fixing antibodies associated with the illness are demonstrated.

CHEMOTHERAPY

In the treatment of virus pneumonia, sulfa drugs have generally proved to be of little value. Possible exceptions are the secondary bacterial pneumonias following influenza A or B. Penicillin has been shown to have a definite inhibitory effect on viruses of the psittacosis group in experimental animals.^{13,14} Although no clinical evidence of its effectiveness on psittacosis in man is yet available, a trial of this drug in severe cases which presumably belong to the psittacosis group would appear justified. There is no evidence at present that penicillin is effective in the more prevalent and milder primary atypical pneumonia not caused by psittacosis-like viruses.

DISCUSSION

The present evidence suggests that the majority of cases of virus pneumonia are caused by a single agent which in recent experiments has been transmitted to chick embryos, cotton rats, and hamsters. The relation of this virus to sporadic cases of undifferentiated respiratory disease without pneumonia and to epidemics of influenza-like illness not caused by the influenza virus is under investigation. It is hoped that the recent advances in knowledge of the etiology of primary atypical pneumonia and other virus pneumonias may lead to a better understanding of the epidemiology of these diseases and to the development of methods of control, immunization, or chemotherapy.

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CURRENT CONCEPTS IN VARICOSE VEIN THERAPY

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ANY clear evaluation of the methods now being employed in the treatment of varicose veins is contingent upon a knowledge of both the normal and abnormal anatomy and physiology of the peripheral venous system. Several methods of therapy regarded as definitive by their proponents fall short of their goal because basic factors are either ignored or not fully appreciated.

If an adequate solution to the problem was available, one approach would be universally recognized and no further investigative procedures would be indicated. Conversely, if the problem remained unsolved and no interest was being manifested, little would be found in the literature. That progress is being made towards an effective approach is readily borne out by the many therapeutic proposals currently being advocated in medical journals. This makes for a healthy situation which, if continued, will assuredly result in an effective means of combating a common and distressing malady.

ANATOMY

Variations in the course taken by the veins of the lower extremity are numerous, however the normal anatomic arrangement is such as to allow an unimpaired return blood flow. For practical purposes this venous system can be divided into four component parts, of which only the features pertinent to peripheral venous pathology will be discussed. To be technically correct, any description of venous anatomy should begin at its peripheral source and be carried cephalad. However, for reasons of surgical convenience a reverse order is utilized here, unless otherwise specified.

I.—*The deep system*, namely the femoral vein and its tributaries. Adequate descriptions of this phase of the venous return are readily available in the literature.

II.—*The superficial system*, which is composed of the internal saphenous vein emptying into the femoral vein, and the external saphenous vein which empties into the popliteal vein. While no specific pattern prevails for these two superficial vessels, a more or less general picture has evolved from various studies. The juncture of the internal saphenous vein with the femoral vein is a constant finding. The three main tributaries in the sapheno-femoral region, namely the superficial circumflex iliac, the external pudendal, the superficial epigastric veins are usually present although variation and duplication are not uncommon. Tributaries of variable size arising from the anterior, mesial and posterior aspect of the thigh

join the internal saphenous along its course. In addition, any number of anomalous tributaries may be present. Quite recently it has been conclusively demonstrated that the saphenous stem, or one of the stems if two are present, dips under the superficial layer of the deep fascia in the mid-thigh, where it remains throughout its course down the thigh and leg, although tributaries from it may emerge through the fascial layer to lie superficial to the deep fascia. The importance of this subfascial stem becomes apparent when it is realized that any vein communicating between it and the deep system could, in the face of inadequate therapy, conceivably perpetuate any pathology existing in the superficial venous system. (Figure 1). The external saphenous vein has its juncture with the popliteal vein in the upper portion of the popliteal space. It originates on the dorsolateral aspect of the foot, courses posterior to the external malleolus up the posterior lateral aspect of the leg, piercing the deep fascia in its mid-third, from whence it continues upward to join the popliteal vein. The femoro-popliteal vein draining the posterior aspect of the thigh communicates with the external saphenous in the popliteal space.

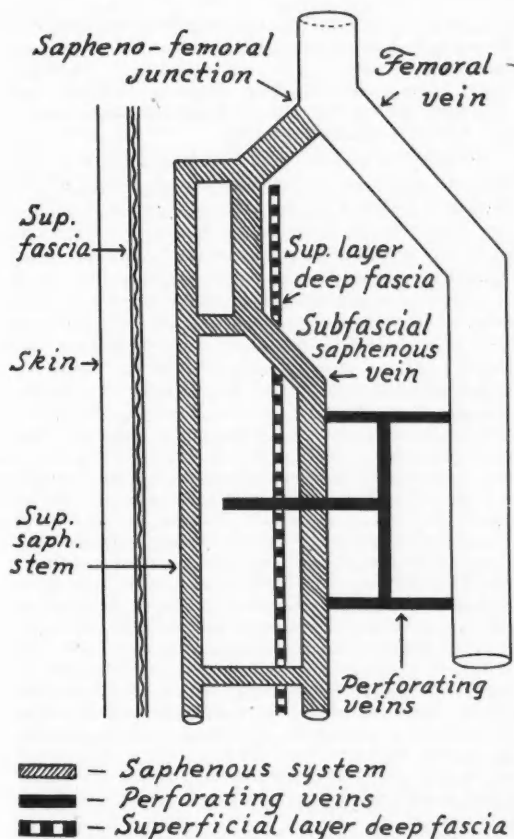


Fig. 1.—Schematic drawing showing the relationship of the internal saphenous and perforating veins to the superficial layer of the deep fascia.

III.—Veins, both superficial and deep, emptying into the internal iliac vein. Perhaps further anatomic studies will reveal these veins as contributing factors in both the recurrence and perpetuation of varices, either directly, or by serving as communicating channels for the

retrograde flow of blood from the internal to external saphenous vein.

IV.—Communicating veins connecting the superficial and deep systems. Although inconstant in number these short venous channels are invariably present and normally permit the flow of blood from the superficial to deep system, valves preventing a reverse flow. Anatomical studies of the leg by Linton¹ and more recently of the thigh by Sherman² have corroborated this finding and also have quite conclusively demonstrated that in the face of dilatation and resultant valvular incompetency these perforating veins may serve as either actual or potential sources for retrograde blood flow. In attempting to reduce the incidence of recurrences, the clinical significance of these offending perforating veins cannot be minimized.

PHYSIOLOGY

The return of blood from the lower extremity is contingent upon three complementary factors, namely, capillary blood pressure; venous support by muscle and fascia in conjunction with competent valves; and changes in intrathoracic pressure associated with diaphragmatic movement. The force of gravity, mechanical impingement and increased intra-abdominal pressure are among the important factors which militate against a return flow.

Normal capillary blood pressure is quite unable to neutralize this constant venous back pressure, so the progression of venous blood is largely dependent upon pressure applied by contiguous musculature and fascia. In the normal vein with competent valves, external pressure results in the displacement of venous blood towards the heart. This action results in the segmental reduction of venous pressure, and since no retrograde flow of blood follows the release of pressure because of a competent valvular mechanism, the evacuated segment can only fill from below. These coordinated factors are the salient features in venous return from the lower extremity in normal individuals.

In contradistinction to the deep system which has both the protection and support of the contiguous musculature and fascia, the superficial venous system has but little fascial and no direct muscle support. As a consequence, the venous return must largely depend upon pressure exerted by indirect muscle action plus the resiliency of overlying superficial structures. The latter quality obviously decreases as the subject becomes older and as a result, vessel wall distention can be unimpeded at a time when support is most essential. Concomitant with this process valvular incompetency develops, and in the face of this incompetency any beneficial action derived from adjacent support is immediately lost, as external pressure displaces blood not only towards the heart, but distally as well. Release of external pressure also allows filling from both above and below, with the result that no venous return is effected. Once the process is set in motion it is doomed to pathological progression as the venous back pressure increases and produces even more involvement. Valvular incompetency soon embraces the communicating veins, and as a result, blood spills from the deep into the superficial system in a not inconsiderable amount, and a further increase in peripheral venous pressure is the inevitable sequel. This in turn is followed by an increased capillary blood pressure which seriously impairs normal capillary function. Fluid balance between capillary and tissue space is disturbed so that fluid with an abnormally high protein content accumulates in the tissues. This favors fibroblastic proliferation which can easily set the stage for eventual scarring and ulcer formation. In other words, a superficial system which normally aided in the return of blood to the general circulation is not only no

longer able to do so, but actually contributes to a highly impaired nutritional state.

THERAPY

Any effective approach must do one of two things; reestablish the normal physiologic function, or eliminate that phase which has become a liability to the system. The first is not feasible because the venous damage is irreparable either through rest, medical or surgical intervention. The only other alternative is the removal of the pathology which is hazardous to the individual.

Presumably working from a valid premise that an attempt should always be made to effect relief with a minimum of intervention, initial attempts were made to secure benefit by injecting thrombogenic, and later, sclerogenic substances into the diseased vessels. In other words, a treatment which usually is not too painful and allows the patient to be ambulatory with a minimum of disability would seem to offer much. However, subsequent events have shown that following injection therapy the endothelium is rarely completely destroyed, and the residual islands of undamaged intima serve as bases from which regeneration usually proceeds. Organization and recanalization of the thrombosed segments are almost inevitable sequelae, thus reestablishing the preexisting pathology. The incidence of recurrence following sclerotherapy in no sense militates against its use in certain situations where it is not only indicated but highly preferable, namely in patients with limited life expectancy and in those suffering from constitutional disease which would make surgery unduly hazardous. Injection therapy might also be condoned in the treatment of minor varices, but it should be borne in mind that palliative sclerosive therapy will not only have little effect on the progress of the disease, but may also expedite its progression through destruction of remaining competent valves.

Perhaps the currently most popular surgical procedure in the treatment of varicose veins is ligation of the internal saphenous vein at its juncture with the femoral vein. Unless this operation is done carefully with a full appreciation of the regional anatomy, much of the benefit which might conceivably accrue is lost. The division of the saphenous must be done right at the femoral vein, and all tributaries must also be divided to avoid reestablishment of a retrograde circulation through collaterals. The femoral vein must be identified and exposed for some distance, both proximal and distal to the saphenous junction, to avoid leaving any tributaries, some of which could easily be confused with the femoral vein. The latter situation is perhaps more frequent than commonly supposed.

While division of the saphenous vein at its juncture with the femoral is within itself a very valuable procedure in the treatment of varicose veins, its inadequacy becomes manifest when the high incidence of clinical recurrences is noted. Some of the highly spectacular results being reported in the literature following this procedure can possibly be attributed to one or both of the following conclusions: complete disregard of post-therapy varicosities because the patient is asymptomatic; or attributing residual varicosities to a process quite independent of that associated with surgery. Either premise is untenable in any proper compilation of results.

That the communicating veins are etiologically important in recurrences and perpetuation of varicose veins is becoming increasingly apparent. Attempts have been made to combat this in various ways, such as multiple ligations of the saphenous stem or its tributaries at various levels which are presumed to coincide with their points of juncture with perforating veins. These approaches have not, on the whole, proved effective because collateral

pathways soon circumvent the obstruction thus created, or recanalization takes place directly at the point of ligation. It is not illogical to deduce that any surgical approach which fails to permanently eliminate this source of retrograde blood flow will perform offer a lower incidence of effective relief.

The use of sclerosing solutions at the time of surgery or postoperatively to combat residual varicosities is also a common procedure. Abundant evidence has accumulated to substantiate the statement that recanalization almost always follows sclerosing therapy, particularly in the face of a maintained venous back pressure, therefore using this agent as a complementary procedure should do little to enhance the permanency of the treatment.

SURGICAL PROCEDURE

Since a damaged saphenous vein cannot be corrected and interruptions in its course will be reestablished through collateral pathways and recanalization, the remaining alternative is removal of the saphenous vein from its juncture with the femoral vein down to a point below the lowest leg perforator. Appropriate treatment should also be afforded all demonstrable incompetent thigh and leg perforating veins. The following surgical procedure, not unlike that advocated by Sherman,² is herewith suggested. Preoperative sclerosing of varicosities below the knee expedites subsequent surgery and also limits postoperative bleeding. Sclerosing solutions are used here and later as a surgical adjunct rather than as a definitive therapeutic agent.

Under spinal anesthesia, an incision is made below the inguinal crease and the saphenous stem is exposed and divided. Sufficient sclerosing solution is then injected into the distal stem to insure the formation of a thrombus, or if two stems are present, identical treatment is given both. The sapheno-femoral junction is then dissected in the usual manner, isolating each tributary as far from its point of junction with the saphenous or femoral vein as is feasible, where it is ligated and divided. As previously stated, great care must be taken to completely expose the sapheno-femoral junction so that no tributaries may be left as a potential source for reestablishment of collateral circulation and recurrence of the venous pathology. The saphenous vein is then ligated flush with the femoral vein and transected. The distal stem is then freed, usually digitally, to a point which approximates the juncture between the proximal and middle thirds of the thigh on its medial aspect, where an incision is made. Any tributary found on this portion of the saphenous stem may either be divided through the initial incision or brought down through the mid-thigh incision and divided. In the mid-thigh it is invariably necessary to incise the superficial layer of the deep fascia to expose the inner saphenous stem. In the presence of a double stem, one stem will fail to dip beneath the fascia, remaining superficial throughout its entire course. This accessory stem is followed as far distally as practicable, using the same technique described for the main saphenous vein. The medial surface of the main or inner saphenous stem in this region will reveal a perforating vein which through careful dissection, can be followed to its approximate junction with the femoral vein, where it is ligated and divided. This is necessary in order to insure the elimination of direct as well as indirect accessory communicating veins. Perforating veins of this type are probably responsible for some of the recurrences noted in less extensive operative procedures. At this point, the fascia over the sapheno-femoral junction is closed with a purse string suture of black silk and the inguinal incision is closed with interrupted mattress dermal.

The stem is then followed distally with a Mayo stripper to a point immediately above the knee where

additional perforating veins may be present as indicated by tests done previous to surgery. However, geniculate tributaries are an almost constant finding in this area, as well as below the knee. Because it creates a bifurcation, any sizable tributary will offer resistance to the Mayo stripper and this in turn will serve as a guide as to where additional small linear incisions should be made. At each point of bifurcation, the offending tributary may either be ligated or divided, or if its size warrants, it too may be followed distally either through digital dissection or use of the stripper.

Essentially the same basic pattern may be followed in the leg where previous tests serve as a guide to possible points where perforating veins may be present. Small exploratory incisions may also be made in these areas, and the offending vessels traced to their point of entry into the deep fascia, where they are tied and divided; the remaining fascial aperture is then closed with appropriate sutures. Not infrequently the site of a tributary will coincide with, or approximate the level of a perforating vein. As a consequence, the total number of incisions should at no time be excessive. At any rate, the saphenous dissection is carried to a point below the lowest perforating vein, where it is divided. All wounds are closed with interrupted mattress dermal.

Whenever the short saphenous is obviously dilated or incompetent as revealed by appropriate tests, the patient is turned and a transverse incision is made on the lateral aspect of the popliteal fossa. The fascial sheath is incised sufficiently to give adequate exposure of the underlying structures, the short saphenous vein is identified and ligated at its point of juncture with the popliteal vein. Care should be exercised not to injure the tibial nerve which lies immediately lateral to the popliteal vein. If indicated, the short saphenous is then followed distally in the same manner described for the internal saphenous; any perforating veins encountered, particularly in the mid-calf region, should be followed to their approximate point of juncture with the deep system. The fascial incision in the popliteal fossa is then closed with interrupted black silk. The skin closure is made as previously described. To allay any subsequent bleeding, firm pressure bandages are then applied from the toes to the groin.

The procedure advocated requires meticulous and painstaking surgery and the operation is not a short one, but when carefully done there is no attendant shock and the mortality is infinitely lower than any other surgical procedure of comparable duration. Regardless of the extensiveness of the surgical procedure, early ambulation is a mandatory order, and only under extenuating circumstances is the patient allowed to remain in bed longer than twenty-four hours after surgery. Should the latter be necessary, active and passive leg exercises are instituted to combat venous stagnation. Patients usually leave the hospital the first postoperative day with a minimum of discomfort. Any postoperative edema, attributable to circulatory and lymphatic readjustment, is transient, and can be readily controlled with firm elastic bandages.

Attempts at complete removal of the saphenous vein were made many years ago. However, the reasons the procedure initially fell into disrepute have been currently largely eliminated. When it was originally introduced, no preoperative sclerosing was done to limit surgical bleeding and obviate postoperative hemorrhage, and the dissection of the sapheno-femoral junction was undoubtedly not complete in many instances. Then too, the importance of the perforating veins was not appreciated and these were merely torn in removal of the saphenous stem, thus leaving intact, particularly in cases where the inner saphenous stem was undisturbed, direct as well as indirect connections between the deep and superficial systems. An unnecessarily high percentage of recurrence

naturally resulted. In addition, patients were kept in bed following surgery for lengthy periods, a fact which materially contributed to postoperative complications. All these factors played an important part in discrediting what was really a material advance in varicose vein therapy.

CONCLUSION

The surgical treatment outlined is more extensive than its predecessors, but any more conservative approach at least fails to eliminate all currently demonstrable etiologic factors. Regardless of the type of therapy, under no circumstances can the incidence of residual or recurrent pathology be considered negligible, and surgical results are still influenced by the extent of the varicosities at the time of surgery. Manifestly a much better result can be anticipated when the pathology is limited in both extent and severity. At any rate, those who devote themselves to the problem will find venous pathology of the lower extremities a most interesting field in which much constructive work is yet to be done.

The above procedure is suggested as a means of obtaining a more satisfactory end result in the treatment of varicose veins.

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RHEUMATIC FEVER: ITS RECOGNITION*

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I.—Introductory Statement.—The importance of the topic to be discussed is evidenced by the facts that 2 per cent of the school children of the United States have heart disease as a result of the rheumatic state; that 98 per cent of all heart disease in patients under 20 years of age is of rheumatic fever etiology; that it causes more deaths in the first two decades of life than all of the communicable diseases plus pneumonia; that it causes annually ten times more deaths than infantile paralysis; and that a study of the young men rejected for military service because of heart disease showed the rheumatic state to be the etiologic factor in 51 per cent in Boston, 70.3 per cent in Chicago, 64.4 per cent in New York, 65.9 per cent in Philadelphia, and 39.6 per cent in San Francisco. (White, Levy & Stroud; *J.A.M.A.*, Dec., 1943.) The importance is further emphasized by the recent knowledge that rheumatic fever is not a disease confined to the temperate zone but that it is almost as prevalent in subtropical climates as in the temperate climates (Sampson; *Amer. Heart*, Feb., 1945) and that even the acute fulminating type of the disease is frequently seen in the tropics. (Huntington; Personal Communication, 1945.) The belief that the disease is confined to the temperate zone is due to the more frequent occurrence of the severe types in that zone.

This important disease now becomes a global problem. Hereditary susceptibility to the disease, previously thought to be a Mendelian recessive character (Armstrong and Wheatley; *Metropolitan Life Insurance Co.*, Nov., 1944)

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may be largely due to poor nutrition or to group crowding as shown by the experience of the Army and Navy in training centers. Good nutrition and segregation may be a large factor in protecting the individual from an inciting agent such as the Beta streptococcus hemolyticus (Wilson; Rheumatic Fever, Commonwealth Fund, 1940). It is true that children of parents who have had rheumatic fever are more susceptible to the development of the disease, in the presence of a streptococcus hemolyticus infection, i.e., tonsillitis, scarlet fever and otitis media, than are those children of non-rheumatic parents. (Paul; Epidemiology of Rheumatic Fever, 1943.)

DEFINITION

Out of the combined experience of the clinician, pathologist, bacteriologist, allergist, neuropsychiatrist and dermatologist working with this disease in a very large group of patients of military age, a consensus of opinion has gradually developed that we are dealing with a disease entity best characterized by the following definition: *Rheumatic Fever is a systemic anaphylactic inflammatory disease with protean manifestations of varying severity and duration.* Pathologic, histologic and clinical observation shows that the disease is a hypersensitivity angitis manifest in all of the body structures from the skin to the smallest subdivision of the viscera.

THE PHASES OF THE RHEUMATIC STATE

The first phase of the disease is that period of illness during which the patient is the host to the beta type of the hemolytic streptococcus. From military experience it has been learned that about 5 per cent of trainees develop some manifestation of a hemolytic streptococcus upper respiratory infection. This upper respiratory infection may take the form of a pharyngitis, tonsillitis, otitis media or a sore throat with a scarlatiniform rash, the so-called scarlet fever. Approximately 5 per cent of this group of patients develop the symptoms and signs of rheumatic fever. Therefore, it is logical to consider every patient with a hemolytic streptococcus throat infection a potential rheumatic fever subject. In those susceptible individuals who develop rheumatic fever it is proper to consider this the first phase of the disease.

The second phase is the period of latency lasting from one to four weeks in duration. It is during this, the second phase of the disease, that the patient develops a hypersensitivity, is found to tire easily, may run a mild fever and have a persistent leucocytosis, elevated blood sedimentation rate and a gradual increase in the level of the antistreptolysin titre. (Rautz; Paper read before the California Heart Association, 1944.) This second phase is frequently noted only as an interval of time wherein the painstaking physician will find that the patient is not symptom free.

The third phase is the well-known period of rheumatic fever activity. The protean manifestations may be grouped into four distinct types, each of which with its symptom complex will be described in detail subsequently. The severity and duration of the phase of activity cannot be predicted as the most fulminating onset may be followed by a relatively short period of activity, for example, from four to six months, while in the sub-clinical type activity may persist for years.

The fourth phase is the period of rheumatic fever inactivity. It is the period of the arrested rheumatic state, or the period of rheumatic quiescence. This phase of the disease may be long or short, depending upon reactivation of the rheumatic state. The mild pain occasioned by muscle jelling, joint stiffness and soreness resulting from fatigue or exposure do not constitute a reactivation of the rheumatic process. An upper respiratory infection followed after a short interval of fever, tachycardia,

malaise, dyspnea, migrating polyarthritides with concomitant laboratory findings of an increased blood sedimentation rate, leucocytosis and electrocardiographic changes constitute a reactivation. Of a large number of patients returned to a rheumatic fever unit for supposed reactivation, only 2.4 per cent were found to have a reactivation. Thus, the fourth phase of the disease begins with the termination of rheumatic fever activity and ends only if reactivation occurs.

ONSET OF THE RHEUMATIC STATE

The beginning of the active stage of rheumatic fever may be insidious and go unnoticed and undiagnosed for a long period of time, as shown by the survey of rejectees with cardiovascular disease. (Levy, Stroud and White; J.A.M.A., Dec., 1943). It was found that 71.2 per cent of patients in four cities and 50 per cent in two cities did not give a history of the acute rheumatic fever. On the other hand, the onset of the rheumatic state may be very severe. The younger the patient, the more severe the onset, appears to be the rule. The latency phase of the disease is ended by an acute illness characterized by migrating polyarthritides, fever, shortness of breath, tachycardia out of proportion to the elevated temperature, loss of appetite and severe sweats. The patient is restless but moves the extremities very little because of painful joints. The face is flushed. The tongue and lips are dry. The skin is hot and dry alternating with periods of drenching sweat. The migrating polyarthritides usually begins in the larger joints such as the knees, ankles, elbows, wrists and at times the hip and shoulder joints. The periarticular tissues are swollen, hot and tender. As the process begins to subside in one joint, it lights upon an analogous joint. The polyarthritides persists a relatively short time after the patient has been put to rest. The administration of salicylates sufficient to raise the blood level to 30 milligrams per 100 cc. of blood relieves the polyarthritides promptly. Those patients with sedentary duties do not develop the severe joint manifestations that characterizes the physically active group.

The fever may be absent, moderate or severe. The severely elevated temperature persists for 10 to 18 days and then gradually subsides or it may persist at a low level for months.

The shortness of breath is usually overlooked. It is very common in the acute stage and is the first sign of myocardial failure and/or rheumatic pneumonitis.

The tachycardia is out of proportion to the degree of fever. Even though fever is absent, a tachycardia is usually present. The tachycardia persists as long as there is activity of the disease.

During the acute onset, carditis is shown by dilation, gallop rhythm and electrocardiographic changes may present itself. Pericarditis as indicated by a to-and-fro friction rub or by an effusion, is not frequently diagnosed. In our series of patients it was diagnosed clinically in 2.82 per cent of cases. Endocarditis is diagnosed only if the murmur is: (1) diastolic in time; (2) if a systolic murmur persists through six months' observation; (3) if the systolic murmur remains the same or grows worse in intensity and is heard in all positions and in all phases of respiration; (4) if the systolic murmur is transmitted; and (5) if the chamber enlargement or systolic thrill are found in the later period of the six months' observation. These signs of carditis may be present early in the acute onset but most frequently are later manifestations.

Pneumonitis was the presenting factor in 12 per cent of two hundred patients with prolonged rheumatic fever. The symptoms of rheumatic pneumonitis in order of their frequency appear to be, shortness of breath, tachycardia, fever, pleuritic pain, malaise, and cough. The shortness of breath and tachycardia may precede the fever, pleurisy,

and cough by many hours to a few days. The physical findings are those of small areas of dullness and diminished breath sounds anywhere in the lung fields. Fine râles soon appear. The patchy areas of pneumonitis shift from one site to another. The upper lobes are involved as frequently as the lower lobes. A pleural effusion may appear very rapidly. It disappears with equal rapidity unless congestive failure intervenes. Thorocentesis, like pericardial drainage, is seldom necessary. The x-ray findings of rheumatic pneumonitis are those of so-called primary atypical pneumonia. The pathologic histology is that of a pulmonary angitis with multiple small infarctions.

Weight loss and loss of appetite are very common at the onset. Returning appetite and gain in weight are good indices that the rheumatic activity is subsiding.

Abdominal pain is due to localized peritoneal irritation resulting from the angitis or capillary involvement in the parietal and visceral peritoneum. Confusion with acute appendicitis is not frequent. In the acute onset of rheumatic fever, abdominal pain is frequently due to diaphragmatic pleurisy or to peritoneal irritation. Usually the dyspnea, tachycardia, signs of pneumonitis or carditis, and polyarthritides are out of proportion to the abdominal pain. If the abdominal pain localizes and the classic picture of acute appendicitis persists, then operation should be done. In our series as will be reported in another paper, the diagnosis was not difficult. The problem of acute appendicitis at the onset of acute rheumatic fever was not frequently encountered. The patients who developed acute appendicitis did so during the prolonged convalescence and the number did not exceed the expectancy in a similar age group of non-rheumatic fever patients.

Chorea at the onset of acute rheumatic fever is very rare in our patients. Only .04 per cent of rheumatic fever patients developed chorea at any time during the period of observation.

At the onset of the disease, erythemas are frequent. The erythemas are those of an anaphylactic nature, varying from erythema marginatum to urticaria. Erythema multiforme and erythema nodosum are not manifestations of rheumatic fever activity.

Subcutaneous nodules are not frequently seen at the onset in patients of military age. Subcutaneous nodules when present, do not necessarily indicate a severe rheumatic activity.

Epistaxis is quite common at the onset of the disease in children. In the age group from 18 to 25 years 0.3 per cent patients show this phenomenon. However, in another study (Montgomery, 1945) it has been shown that there is a very definite increase in capillary permeability and fragility in the rheumatic state.

Concomitant with the onset of the disease there is an increase in the leucocyte count and an elevation of the blood sedimentation rate and of the antistreptolysin titre. None of these findings are specific for the rheumatic state.

THE CLINICAL TYPES OF RHEUMATIC FEVER

There are four clinical types of rheumatic fever recognizable, namely, the acute fulminating, the subacute polycyclic, the subacute monocyclic and the subclinical.

The Acute Fulminating Type was found to occur at a rate of 4.3 per cent in a series of patients who gave evidence of rheumatic activity for more than six months. This type is more frequent in childhood. The acute fulminating type is characterized by a sudden onset with migrating polyarthritides, fever, restlessness, severe tachycardia, dyspnea and drenching sweats. Carditis appears rapidly as shown by dilatation, gallop rhythm, murmurs, and at times pericarditis. Pneumonitis is present in many patients. Pneumonitis can be detected by careful physical examination, but is more frequently diagnosed by the

x-ray studies of the lungs. The migrating polyarthritides is of short duration although usually severe at the onset. The fever is relatively high, ranging from 101 to 103 degrees. The acute febrile period lasts from 10 to 18 days and then subsides with a rapid convalescence or goes into a prolonged low-grade state of activity. The tachycardia is marked and is the last sign to disappear. The leucocyte count is moderately elevated with a marked increase in the granulocytes. The urine may contain albumen and a moderate number of cells. Approximately 20 per cent of patients in this group show electrocardiographic changes indicative of myocardial and pericardial involvement. The acute fulminating type usually terminates with one cycle. This group represents those patients who are most susceptible to the disease. Although the mortality is low in the primary attack, due to a marked hypersusceptibility, these patients are more likely to have fatal reactivations.

The Subacute Polycyclic Type is similar to the acute fulminating during the onset except that it is less severe. It is more frequent. The percentage of occurrence in our series of patients was 27.6 per cent. The cycles may be short and spaced at long intervals, or in the more severe subtypes the cycles may be long and spaced at shorter intervals of time. It is in this type that the mortality is the greatest. Concerning fatalities 63.6 per cent in our series of patients were in this group. Likewise in this group with repeated cycles of activity, the most marked cardiac enlargement, most frequent signs of endocarditis and pericarditis are found. During one or all of the cycles pneumonitis of greater or less degree occurs. After the first cycle, polyarthritides is usually absent, and the response to salicylate therapy is poor. Congestive heart failure, complicating carditis occurs almost exclusively in this group of cases.

The Subacute Monocyclic Group is the most frequent of the four types occurring in our series in 61.3 per cent. The onset may be very mild and scarcely recognizable, or it may be moderately severe with moderate fever, mild migrating pains, a definite tachycardia and moderate elevation of the leucocyte count and blood sedimentation rate. The response to salicylates is usually prompt and the acute onset lasts for seven to fifteen days. Thereafter the course may be that of a rapid return to the stage of quiescence so that full activity may be resumed in from four to six months; or the course may be long with signs of mild activity persisting over a period of six to nine or more months.

The Subclinical Type was found in 5 per cent of our series. This group comprised those patients who may or may not have had an upper respiratory infection, and who in the course of a check up examination were found to have developed definite signs of rheumatic heart disease. Such signs are those of cardiac chamber enlargement, mitral and/or aortic insufficiency murmurs, paroxysmal tachycardias and auricular fibrillation. Upon careful observation this group of patients exhibited a few signs of rheumatic activity such as a cyclic low grade temperature, and a mildly increased sedimentation rate. At other times no confirmatory evidence of rheumatic activity was found. Two patients within this group died suddenly. Death in each instance was due to an acute anaphylactic reaction with the pouring out of collagen into the walls of the coronary arteries sufficient to cause an occlusion and myocardial infarction.

THE CRITERIA FOR THE DIAGNOSIS OF RHEUMATIC FEVER

The diagnostic criteria have been previously laid down by Swift, H. E. (J.A.M.A., June, 1929), and by Jones, D. E., (Stroud; Cardiovascular Disease, 1943).

The diagnostic criteria are subdivided into major and minor groups:

The major criteria are five in number, namely, a history of a previous attack, carditis, fever, migrating acute arthritis and chorea;

The minor criteria in order of their relative importance are, pneumonitis, tachycardia, subcutaneous nodules, erythemas, epistaxis and purpura, weight loss and abdominal pain. Iritis and conjunctivitis are too infrequent and indefinite to be included.

A previous history of rheumatic fever was obtained in 28.1 per cent of our patients. The importance of a previous history is of great value. Too often, however, mild arthralgia and muscle jelling are mistaken for a previous history. A previous history is of great diagnostic helpfulness when a patient presents himself with one or more of the major criteria and two or more of the minor criteria.

MAJOR DIAGNOSTIC CRITERIA

Carditis is probably the most important of the major diagnostic criteria. Carditis can be said to be present when a tachycardia, especially a resting pulse of 100 or more, persists; when there is dilatation of the heart as shown by enlargement and/or gallop rhythm; when pericarditis is evidenced by a to-and-fro pericardial friction rub and/or a pericardial effusion; when myocarditis is demonstrated by dilatation, gallop rhythm and electrocardiographic changes; and when endocarditis is established by hearing definite organic cardiac murmurs.

Fever is considered to be the most frequent evidence of an active rheumatic state. It is the most reliable evidence of activity in the absence of demonstrable carditis. At the onset the temperature range may be normal or as in the more severe types as high as 102 to 104 degrees. The degree of fever is not the paramount observation, but persistence of the fever is of utmost importance. No clinician can be sure that activity has ceased unless a carefully taken and recorded temperature curve has been observed for at least six to eight weeks time. Persistent fever in the subacute types of the disease takes one of two forms. The more frequent form is an evening rise to 99 to 100 degrees. The more insidious and most frequently unobserved form is a cyclic type of curve. In this form the temperature remains at a normal or a slightly subnormal level for one to two weeks and then becomes mildly elevated for a few days or as long as a week. It is rare for fever to be the only evidence of activity. Persistent fever must be viewed seriously especially if two or more minor criteria are present.

Polyarthritis, by which term is meant migrating acute arthritis, for over three centuries has been considered the significant sign of the disease. In recent years the literature has emphasized the unimportance of the joint signs. In the primary attack the joint signs are usually prominent and frequently the presenting symptom and sign. The major joints become red, hot, and swollen in a migrating fashion. With rest, the joint signs disappear quickly. The salicylates in adequate dosage are specific and prompt in action. The red, hot swollen joints subside leaving no residual pathology in the joints of the younger age groups. In those patients in the third decade of life arthralgia may persist. The persistent arthralgia is not considered a sign of activity, when all other criteria have disappeared. If one major or two minor criteria persist, then the complaint of painful joints must be considered evidence of activity.

Chorea is a relatively rare condition in the second and third decades of life. It has occurred in our series of patients in .047 per cent. None of the cases have exhibited the severe choreiform movements seen in childhood. There have been other neurological manifestations occurring during the active course of the disease. Two patients developed temporary hemiplegia with gradual complete recovery. Six patients developed unilateral or

bilateral brachial plexus involvement varying from weakness and pain in the entire upper extremity to wrist drop. Two patients developed temporary foot drop. These neurologic signs were not considered of psychic origin. With continued treatment of the rheumatic state the organic neurogenic signs cleared up.

MINOR DIAGNOSTIC CRITERIA

The minor criteria in the order of their relative importance are herewith described.

Pneumonitis has been overlooked by most American clinicians until: Baas, C. P. and Schwartz, S. P. (Am. Ht. J., April, 1927); Paul, J. R.: (Medicine, December, 1928); Swift, H. F. (J.A.M.A., June, 1929); Coburn, A. F. "The factor of Infection in the Rheumatic State," 1931; and Eiman, John (Am. J. Med. Sc., March, 1932)—called attention to the clinical and pathologic findings. The constant occurrence of pneumonitis in the acutely ill and the frequency with which it is found in the very mild stages of activity emphasizes its importance. Frequently the chief complaint of the patient is dyspnoea and the first outstanding sign is that of pneumonitis, likewise, it is frequently the first sign found in a current cycle and in a reactivation. When the x-ray picture of the lungs is that similar to an atypical pneumonia and the sputum yields no specific organism in a rheumatic fever susceptible patient, the diagnosis of rheumatic pneumonitis is considered established.

Tachycardia is a minor diagnostic criteria which if constant and persistent during sleep is of positive value. Paroxysmal tachycardia and auricular fibrillation are rare in our series of patients.

Subcutaneous Nodules are not seen frequently. These are a definite sign of activity. In the past their significance has been considered ominous, but perhaps that is due to the fact that they are not looked for carefully in the subacute and mild cases. They are a diagnostic sign but do not carry the poor prognosis formerly attributed to them.

The Purpuras and Epistaxis. There is a definite increased fragility and permeability of the capillaries in the rheumatic subject as is shown by one of our co-workers, Leut. Comdr. Hugh Montgomery. The purpuras are seen rarely. Not over .3 per cent in our entire case load have shown purpura. Epistaxis is of similar significance and occurs very infrequently in the 2nd and 3rd decades. When purpura is present it is a very helpful diagnostic sign.

Weight Loss is a very common occurrence in the acute phases of the active state and weight gain is commensurate with the improvement in the patient.

Abdominal Pain has been considered of great importance in the literature. It is a relatively uncommon occurrence late in the disease. At the onset of an acute episode there may be abdominal pain without definite localizing signs but if there is a previous history of rheumatic fever and the findings of shortness of breath and tachycardia out of proportion to the fever, and especially if there are joint manifestations, it is safe to wait and watch, but if in doubt, then operate as the risk is small.

Recurrent Cycles may be initiated by surgery such as dental extractions or tonsillectomy. The fracture of bones is almost sure to set up a recurrent cycle of activity. Therefore it is unwise to do dental extractions or to perform tonsillectomy until six months have elapsed after activity has ceased. Fractured bones must be firmly fixed as soon after fracture as possible.

Laboratory Findings are not specific in rheumatic fever. There is no specific laboratory diagnostic test.

Anemia of the secondary type may develop rapidly in the very acute types. In the mild types of the disease anemia is uncommon.

Leucocytosis. The white blood count during the acute onset may be as high as 15,000 to 24,000 with as much as 90 to 95 per cent polymorphonuclear leucocytes. In the subsiding stage the leucocyte count falls rapidly to normal and is not a reliable guide as to the degree of activity.

Anti-Streptolysin Titre is elevated at the onset and continues to remain elevated for a long period of time. Because of the technical difficulties and because it remains elevated after other signs of activity have disappeared, it is not a satisfactory guide as to the degree of activity or guide in treatment. Its greatest value is in the epidemiology of rheumatic fever.

Blood Sedimentation Rate is elevated during the time of the phase of activity. It is the best single guide to the degree of activity. If the sedimentation rate remains elevated when all other signs of activity have disappeared, then the clinician must rule out other causes for an increased sedimentation rate.

Electrocardiographic Changes indicative of rheumatic activity are three—first a shifting A.V. conduction time, especially if the P.R. interval is well over .24 seconds. This change is frequently seen in varying degrees up to the Wenckebach phenomena and complete auriculo-ventricular dissociation; second, the typical electrocardiographic picture of pericarditis and third, the Q.R.S. and T. wave changes which are seen in myocardial damage resulting from the anoxia of coronary insufficiency. The coronary insufficiency is the direct result of arteritis of moderate to severe degree.

Urinary Changes in our experience have been minor and notable for their absence. In the acute phases albumin and a moderate number of cells may appear.

THE DIFFERENTIAL DIAGNOSIS

Rheumatic Fever in its acute form must be differentiated from Dengue Fever, Undulant Fever, Rheumatoid Arthritis, Chronic Osteoarthritis and Tuberculosis. This is best done by evaluating the above outlined criteria and by close observance of the clinical course.

In Dengue Fever the course is short, and there is no carditis or prolonged elevation of the sedimentation rate or the antistreptolysin titre.

Undulant Fever is ruled out by a persistently negative cross agglutination test with the *Bacillus Abortus* and *Bacillus Melletensis* and by the failure to develop carditis.

Rheumatoid Arthritis is difficult to differentiate early, but time and visual joint changes, and x-ray joint changes together with a low antistreptolysin titre point to this entity rather than rheumatic fever.

In Osteoarthritis, the development of x-ray evidence of joint pathology and the lack of most of the major and minor criteria of rheumatic fever serve to make the differentiation early.

Tuberculosis is confused by the prolonged fever, but here again the absence of the other four major criteria and most of the minor criteria rules out rheumatic fever.

SUMMARY

The recognition of rheumatic fever is discussed. The onset of the disease is described in detail. The four phases and clinical course of the disease are presented. The diagnostic criteria and differential diagnosis are formulated. Precise knowledge of the many manifestations of the disease will lead to early recognition of the rheumatic state.

U. S. Naval Hospital.

I esteem it a chief felicity of this country that it excels in women.

—Emerson, *Essays, Second Series: Manners.*

RHEUMATIC FEVER CASE-FINDING PROGRAM IN TWO CALIFORNIA COUNTIES*

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IN 1939, the Children's Bureau proposed that the development of a diagnostic and medical care program for children with rheumatic fever and rheumatic heart disease be initiated in a relatively small area near medical and hospital facilities. In the fall of 1940, this program was begun in Solano and Contra Costa counties and by 1941, regular diagnostic clinics were set up in the health centers at Vallejo, Pittsburg and Richmond and in the Children's Hospital of the East Bay region. These counties were chosen only because of their proximity to hospital facilities, and not because anyone suspected them of having a high incidence of rheumatic fever.

It is unfortunate that there is still no specific test for rheumatic fever such as the tuberculin, Wasserman, or agglutination tests. In the absence of a specific test, it is necessary to do a complete work-up of each case to rule out other diseases. Often it is necessary to do serial examinations for months before a diagnosis can be made. This procedure is time-consuming, and with the limited personnel in the Rheumatic Fever Program, it does not permit of a mass survey technique such as can be used in tuberculosis case-finding.

The children examined either had a previous diagnosis of rheumatic fever or were suspected of having rheumatic fever or heart disease. Therefore, the figures presented in this report and giving the percentages of normal and functional hearts found, will be small in comparison to those reported in mass surveys.

During the school year, the school physician, school nurses and teachers are alert for any rheumatic fever symptoms presented by acutely or chronically ill children. Children who present requests for rest periods or for relief from gymnasium period or for special transportation are referred to the school nurse for history investigation. If heart disease or rheumatic fever has been the reason for this request, the child is referred to the rheumatic fever clinic, unless he is under the supervision of a private physician.

From the fall of 1941 to July 1, 1944, some 442 children were examined in the four different diagnostic centers. Of this number, 235, or 56 per cent, were found to have either active rheumatic heart fever, rheumatic heart disease, or potential heart disease (meaning those children with a history of having had rheumatic fever but with no discernible heart damage). Fifty children were given deferred diagnoses and are being kept under observation in the clinics until the diagnosis is determined. One hundred and six, or 24 per cent of the children, have normal hearts and in about 33 per cent of these, a functional murmur was heard during at least one examination.

I may say here that all children are examined on at least two different occasions before a diagnosis of a normal heart or functional heart murmur is made.

Nine per cent of the children examined in this group have congenital cardiac anomalies. Seventy per cent of the children in the rheumatic group had their first attack in California, which is evidence that even though these two counties have had a tremendous increase in population because of the war industries, most of our rheumatic fever is not an imported variety from Oklahoma and

* Read before the San Francisco Heart Committee at its fifteenth annual Symposium on Heart Disease, October, 1944.

From the Rheumatic Fever Program division of the California Department of Public Health.

Arkansas. We have plenty of rheumatic fever in this section of California.

PROCEDURE OF EXAMINATION

I would like to describe briefly the examination of a child in the diagnostic clinic. First, his height, weight and temperature are taken by the nurse; then the laboratory work including complete blood count, urinalysis, sedimentation rate, EKG, Kline and tuberculin are done by the technician. Following this, a history of the child's illnesses and the family history relative to heart disease, "inflammatory rheumatism," and "St. Vitus Dance," is taken from the parent. (Except in rare instances, children are not seen for the first examination in clinic unless accompanied by parent or guardian.) I think that a careful history of the consecutive illnesses and the interim state of health often prove to be important clues to the diagnosis of rheumatic fever. The child is then undressed completely and examined. The skin is inspected for erythema marginatum which is easily missed unless the child is unclothed. I have found it in the region of the 7th cervical vertebra where it would have been unobserved if the shirt had only been lifted to listen to the heart and lungs. Subcutaneous nodules are looked for and palpated for along the tendons of the wrist and ankle, over the knuckles, on the elbow, on the scalp. The regular eye, ear, nose, throat and teeth inspection is made. Lymph nodes are palpated.

The regular heart examination including: inspection, palpation, percussion and auscultation is done (auscultation in both reclining and sitting positions). The soft, blowing systolic functional murmur heard in the 2nd left interspace and along the left border of the sternum is usually of different intensity in the two positions, often is not audible in one position while it may be very distinct in the other. An early mitral stenosis may be missed unless listened for in the left lateral position with the bell stethoscope. Most of the murmurs found in children are high-pitched and are best heard with a diaphragm type stethoscope. The arm blood pressure is recorded and if a congenital heart lesion is suspected, the leg blood pressure is also recorded. The abdomen is always examined for the possibility of a palpable spleen and tender liver and for tenderness over appendix. Since abdominal pain is a fairly common symptom in rheumatic fever, both in its acute and chronic forms, appendicitis must always be ruled out, as that, after all, is the cause of more abdominal pain than any other disease. Out of fourteen children now on the rheumatic fever ward at the hospital, two had appendectomies (one normal appendix and one slightly infected appendix) a few days before the development of polyarthritis. Both of these children have a mild valvulitis with no enlargement of the heart.

The extremities are palpated for tenderness which is only occasionally present in the subacute stage, but is a necessary part of the examination in ruling out bone lesions. Very recently a low-grade osteomyelitis was picked up because of one small tender area which was later confirmed by x-ray. This child also has a systolic mitral murmur and a slightly enlarged heart. Does he also have rheumatic fever?

If the child is ambulatory, a fluoroscopic examination of the heart in the anterior-posterior, left anterior oblique, and right anterior oblique positions is done. A dilatation of the left auricle as seen with the aid of barium in the right anterior oblique position is not uncommon in early rheumatic fever even in the absence of a mitral murmur. The results of the tests and examination are evaluated and the diagnosis is made, or deferred. In the subacute and chronic states of rheumatic fever, many of the tests may be normal or so slightly abnormal that only the history and repeated examinations over a period of time will give a diagnosis. The difficulty in

always making a quick diagnosis of rheumatic fever is exemplified by the group of fifty children who have been given a deferred diagnosis.

The sedimentation rate is one of our most useful aids in following the patient with rheumatic fever to determine when the active phase passes into the inactive phase. However, it is a non-specific test and is increased in tuberculosis and osteomyelitis, two diseases from which rheumatic fever must be differentiated. It may be normal in pure chorea, also in decompensation—increasing only when the decompensation has disappeared. It is very frequently normal in those patients who were referred to the clinic with a history of recent vague aches and pains, epistaxis, and excessive fatigue, and of course, occasionally in a patient who has been diagnosed elsewhere as active rheumatic fever. I often wonder if I am treating subacute rheumatic fever or just chronic fatigue—but in either instance the child puts on weight, regains his appetite and the fatigue disappears. Of course, the diagnostic label of "Rheumatic Fever" is not given to such a child unless there is undoubted evidence of the disease. Speaking of fatigue, it is often difficult for the family and sometimes for the family doctor to realize the necessity of prolonged convalescence in a child with a monocyclic type of rheumatic fever associated with a rapid return to normal of that feeling of "well being," which is present as long as the child remains in bed. When the child is released from his bed too soon, the rapidly returning symptoms of fatigue, irritability, nervousness and poor appetite stress the importance of longer convalescence.

The names and ages of all the children in the family are recorded on the patient's "Face Sheet" in the chart.

DIFFERENTIAL DIAGNOSIS

Here are some of the diagnoses that have in the last three years been confused with rheumatic fever:

Poliomyelitis.—In the acute stage of rheumatic fever, poliomyelitis is often considered because the child with severe arthralgia or arthritis of knees and ankles will not move his legs.

Osteomyelitis.—Of one joint or of many joints.

Tuberculosis.—Of one joint which was found in a two-year-old boy.

Rheumatoid Arthritis.

Acute Lymphatic Leukemia.—Was found in a seven-year-old girl on whom a blood count had never been done.

Acute Appendicitis.—Which probably could be ruled out previous to surgery by a sedimentation rate.

Erythematous Lupus.—Was diagnosed in a thirteen-year-old boy whose onset seemed like rheumatic fever except for the associated rash. He died three months later.

Primary Tuberculosis.—Produces many of the same symptoms as are seen in subacute rheumatic fever, and at times repeated tuberculin tests over a period of time need to be done before tuberculosis can be ruled out.

Trichinosis.—Ruled out by Eosinophilia and/or muscle biopsy.

Hypothyroidism.—Produces fatigue, sometimes rather extreme, with vague body pains. One fourteen-year-old boy wanted to sleep 12-14 hours a day and was complaining of extreme fatigue and muscle pains when walking a moderate distance to school, had a poor appetite and no pep, was found to have a B.M.R. of minus 26. Adequate dosage of Thyroid produced results which ruled out any possibility of the diagnosis being rheumatic fever.

Secondary Anemias.—From other causes, frequently from an inadequate diet or from frequent infections or a series of contagious diseases are difficult to rule out be-

cause secondary anemia is a rather constant finding in rheumatic fever. The children with anemia are more easily fatigued, and have all the attendant symptoms of poor appetite, lack of energy, irritability, occasionally epistaxis. A study of the home situation as to hours of rest which the child has (which includes how many persons he sleeps with) and a dietary evaluation is sometimes needed before the etiological factor is uncovered. A complete pediatric and laboratory examination with adequate follow up are the essentials necessary to case finding in rheumatic fever, whether in private practice or in a service devoted to the diagnosis and care of children who have rheumatic fever.

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QUINIDINE: IN THE TREATMENT OF HEART DISEASE*

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IN discussing quinidine as a therapeutic agent in the treatment of heart disease, the dangers attributed to its use are so frequently emphasized that they often overshadow its benefits.

Quinidine is a valuable drug in the treatment of heart disease. Many advocate it as a most valuable agent in the treatment of the acute arrhythmias but caution, and perhaps rightfully so, of its toxic nature. Some warn entirely against its use. Then, there are those who believe the dangers attributed to the use of quinidine are perhaps over-emphasized, and advocate it not only in the treatment of the acute arrhythmias but also in long standing cases of auricular fibrillation.

MODE OF ACTION

Quinidine is a cardiac depressant. It retards the impulse formation in the sino-auricular and auriculo-ventricular nodes. It slows conduction in the auricles, the bundle of His, and in the ventricles. It lengthens the refractory period.

Quinidine is a potent drug. Like any potent drug used in the treatment of disease, a better understanding of its pharmacological action, its behavior and effects often lessen the dangers of its use and enhances its therapeutic values.

TOXIC SYMPTOMS

The toxic symptoms and accidents most often attributed to the use of quinidine are nausea, vomiting, diarrhea, tinnitus, vertigo and the more serious effects are cardiac stand-still, respiratory collapse, ventricular tachycardia and emboli formation. Most of these complications are perhaps due to two causes:

- (1) Abnormally rapid absorption of the drug, causing symptoms similar to that of an idiosyncrasy.
- (2) Excessive amounts of the drug being given resulting in toxic effects.

It is well known pharmacologically, to avoid complications and toxic effects of any potent drug, a tolerance for the drug must first be established. To accomplish this, very small doses should be given to begin with, then the sizes and frequency of the doses should slowly and gradually be increased.

Most of the toxic symptoms attributed to the use of quinidine are perhaps due to the method in administering the drug, rather than to the drug *per se*. A patient may

well be able to tolerate a test dose of three grains without any untoward effects. However, repeated doses of six grains or more every four or six hours after the initial dose, may be excessive and cause toxic symptoms. In some instances, it may prove fatal.

EXPERIMENTAL STUDIES

How rapidly does quinidine reach the blood and heart muscle after the ingestion of the drug by mouth or given intravenously? Does the size of the dose and the frequency of the dose alter the rapidity of the absorption time of the drug by the blood and by the heart muscle? *Length of time quinidine remains in the blood stream¹:*

(a) In dogs, less than 6 per cent of the drug remained in the blood at the end of seven minutes after single doses, up to 10 grains, were given intravenously.

(b) In patients, the drug reached its maximum concentration in the blood in about thirty minutes after oral administration of single small doses. These findings corroborate the work of Weiss and Hatcher.² No evidence of the drug was found in the blood after one hour.

(c) After repeated small doses were given orally to patients, the maximum concentration of the drug in the blood was reached in about one hour. No evidence of the drug was found in the blood one and one half hours after the last dose was given.

Length of time quinidine remains in the heart muscle after oral administration (Dogs)³:

(a) Single small dose (100 mgm.): The maximum concentration of the drug in the heart muscle (0.046 mgm. per gram of heart weight) was reached in about 30 minutes. No quinidine was found in the heart muscle at the end of four hours.

(b) Single large dose (585 mgm.): The maximum concentration of the drug in the heart muscle (0.209 mgm. per gram of heart weight) was reached in about one hour. It was seven hours before no evidence of quinidine was found in the heart muscle.

(c) Repeated small doses (100 mgm.) given at one hour intervals: The maximum concentration of the drug in the heart muscle (0.105 mgm. per gram of heart weight) was reached in about two hours. It was nine hours before no quinidine was found in the heart muscle.

It will be noted that when the equivalent amounts of a large dose are given in three divided doses, one hour apart, the maximum concentration of the drug in the heart muscle is about one-half the amount and it takes twice as long to accumulate. Fig. 1.

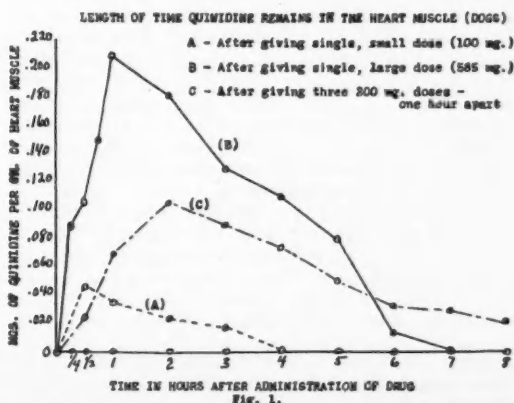


Fig. 1.—Length of time quinidine remains in the heart muscle. (A), After giving single, large dose—585 mg. (B), After giving single, small dose—100 mg. (C), After giving three 200-mg. doses—one hour apart (orally, to dogs).

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Read before the Los Angeles Heart Association, March 29, 1945.

CLINICAL STUDIES

Acute Arrhythmias:—In the acute or paroxysmal arrhythmias, such as auricular tachycardia, auricular fibrillation, ventricular tachycardia, ventricular fibrillation, etc., quinidine need not necessarily be given in large doses to get the most effective results. Three grain doses by mouth every one or two hours may be given until the heart rate is restored to normal rhythm. Similar doses may be given intramuscularly, as used by Sagall, Horn and Riseman.⁴

Extra Systoles:—Quinidine in doses of 0.1 daily or 0.2 daily (0.1 at two hour intervals) is advisable, particularly in cases of chronic myocardial damage. Nathanson⁵ has shown that quinidine may prevent increased ventricular rhythmicity (the basis for ventricular fibrillation) and advocates its use in cases of angina pectoris, showing evidence of ventricular irregularities. Morawitz and Hochrein⁶ used quinidine as a prophylactic measure to prevent fibrillation and acute heart failure in decompensated hearts. They reported favorable results.

Chronic Arrhythmias; Auricular Fibrillation:—The chief objection to the use of quinidine is that the restoration of a fibrillating auricle to regular rhythm may result in the dislocation of an intra-auricular thrombus and the formation of emboli. In 1923, Viko, Marvin and White,⁷ discussing the use of quinidine in auricular fibrillation, concluded that the danger of accidents with quinidine is not much greater than with any other form of treatment. Korn⁸ in the same year asked whether the cases of embolism from the use of quinidine in auricular fibrillation are more frequent than those which commonly occur in fibrillation treated with digitalis or is it that we hear more by reason of the prominence of quinidine in the medical literature. Many others report similar experiences.

Frick and Kennicott⁹ stated it very well when they said, "We are confronted with an unfortunate situation in the treatment of auricular fibrillation, since any treatment that improves the heart action adds to the danger of embolism. It matters not whether the improved heart action is the result of more efficient beats of a heart slowed by digitalization, or a heart restored to normal rhythm through the use of quinidine. One cannot feel that these patients should be denied the beneficial effects of treatment merely because there is a danger of embolism following in the train of restored compensation." They treated eight cases of auricular fibrillation with quinidine, four of which were restored to normal rhythm. One of these patients had auricular fibrillation for four years, and at the time of the writing, two years later, the heart was still regular. One of these patients developed an embolism. Of their forty-three cases of chronic auricular fibrillation treated with digitalis only, there were twelve instances of cerebral or pulmonary embolism.

Kerr¹⁰ in discussing the above paper stated, "There is altogether too much hesitation on the part of many practitioners to use such a valuable drug as quinidine has proven to be. Just as with any other potent drug, we must appreciate the indications for its use and then must give the drug until we have secured the desired effect or until toxic symptoms require the withdrawal of it."

Since 1929,¹¹ we have treated several hundred cases of auricular fibrillation by the ambulatory method, at the University of Minnesota Cardiac Clinic. Fully 70 per cent of the cases were restored to normal rhythm. The number of accidents compared favorably with any similar number of cases treated with digitalis. We had no known instances of sudden death. There was one case of auricular standstill, with no untoward effects.

Many of our patients were cardiac invalids. They could not successfully carry on with their daily duties. Many were heart conscious due to the palpitation and irregular

beating. Many of these individuals whose irregularity was restored to normal rhythm became fully compensated and returned to their normal duties. Maintenance of normal rhythm depends largely on continuing treatment. Some of our patients have continued on therapy and remained regular for as long as ten years.

METHOD OF TREATMENT (AURICULAR FIBRILLATION)

1. Digitalize the patient.
2. Heart rate must be slowed down to between 80-70 beats per minute before starting quinidine.
3. After the heart rate has been reduced, keep the patient on a maintenance dose of digitalis (usually 0.1 gm. or 1 cat unit) during the treatment with quinidine.

Method of Giving Quinidine *

Day No.	8:00 a.m.	10:00 a.m.	12:00 noon	2:00 p.m.
1.	0.1 gm. (1½ gr.)			
2.	0.1	0.1		
3.	0.1	0.1	0.1	
4.	0.1	0.1	0.1	0.1
5.	0.2 (3 gr.)	0.2	0.2	
6.	0.2	0.2	0.2	0.2
7.	0.33 (5 gr.)	0.33	0.33	0.33
8.	0.33	0.33	0.33	0.33
9.	0.33	0.67 (10 gr.)	0.67	
10.	0.67	0.67	0.67	

If the patient complains of any toxic symptoms, such as diarrhea, gastric distress, nausea, etc., reduce the dose to that of the previous day, for a few days, then proceed again as indicated.

If the heart has not returned to regular rhythm after giving 30 grains of quinidine for a few days, discontinue its use. I have found that if it takes much more than 30 grains to restore normal rhythm, it is very difficult to maintain a normal rhythm. After the heart rate is restored to normal rhythm, gradually reduce the dose of quinidine in amounts of 5 grains daily until the patient takes about 15 grains daily. The maintenance dose may be 10 grains or even 5 grains daily in some cases. Usually 5 grains for two doses two hours apart is the average maintenance dose. This dose may be kept up indefinitely together with digitalis.

In my previous reports, I recommended giving quinidine at one hour intervals. I still do to begin with. In many instances, however, in view of the studies on the excretion time of the drug, it might, for general use, be advisable to use the two hour interval.

COMPLICATIONS

Accidents, such as cardiac stand-still, can possibly occur. However, cases of auricular stand-still have been reported due to digitalis. Instances of sudden death have been reported which were probably due to respiratory paralysis. Gordon, Matton and Levine¹² working with cats, showed that respiration ceases one minute or more before the heart stops beating after giving lethal doses of quinidine. We corroborated this finding in dogs. However, it took lethal doses to cause the respiratory paralysis. It is possible, perhaps, for small doses to act as a lethal dose in man.

CONDITIONS UNFAVORABLE FOR QUINIDINE THERAPY

There are some types of cases of auricular fibrillation that are unfavorable for quinidine therapy, but not necessarily contraindicated. They are, particularly, the mitral stenosis cases with marked cardiac enlargement and the very large hypertensive hearts. These cases are the most difficult to restore to normal rhythm and once restored to normal rhythm are hard to maintain. In auricular fibrillation due to hyperthyroidism, the hyperthyroidism must first be controlled.

Should one give quinidine in cases of auricular fibrillation that give a history of throwing off emboli? Oppenheimer,¹³ White and Blumgart,¹⁴ Smith and Boland¹⁵ and others have reported cases of chronic auricular fibrillation and decompensated organic heart disease that were continually forming emboli. The administration of quinidine stopped the emboli formation, restored these hearts to normal rhythm and to normal cardiac compensation. Oppenheimer stated, "We think that the increased danger from embolism during transition from fibrillation to coordinate auricular contractions has been somewhat exaggerated."

White and Blumgart add, "We have herewith reported on two patients in whom the administration of quinidine with consequent return to normal rhythm was undertaken despite generally accepted contraindications. This was followed by abrupt and striking improvement with cessation of pulmonary embolism in Case 1 and congestive failure in Case 2."

Should a slow fibrillating heart controlled with digitalis be restored to normal rhythm? This question is often brought up. Eyster and Swarthout¹⁶ in 1920, experimenting on dogs, showed that the cardiac output in a fibrillating heart was diminished 15-79 per cent. Lewis¹⁷ working on dogs and cats, demonstrated that the minute volume of a fibrillating heart decreased about 20 per cent. In 1930, Smith, Walker and Alt¹⁸ showed that the minute volume increased about 30 per cent when normal rhythm was established in fibrillating hearts that had previously been treated with digitalis. Kerkhof¹⁹ carried on studies in cases of mitral stenosis with auricular fibrillation. He found that the cardiac output increased on the average of 30 per cent after the hearts were restored to normal rhythm. Hirschfelder²⁰ many years ago, stated the following, "The mechanical effect of any arrhythmia is to slow the circulation. This leads to an increased pressure in the veins and upon a cardiac muscle whose tone is diminished, establishing a vicious circle."

Quinidine is perhaps the choice drug in the treatment of cardiac irregularities. Experiments were done on dogs and on a small number of patients (3) to determine the comparative value of "pure" quinidine (which contains about 7 per cent of the hydro-basis) hydroquinidine and the regular commercial quinidine. The latter contains about 80 per cent pure quinidine and about 20 per cent hydroquinidine. In our small series of 8 cases, treated with hydroquinidine, we found no beneficial effects.

SUMMARY

Quinidine is a valuable drug in the treatment of cardiac irregularities. Many of the dangers attributed to its use have perhaps been over-emphasized. To avoid many of the toxic symptoms attributed to the drug, quinidine should be given in small doses to begin with, then gradually and slowly increase the size and number of doses.

Long standing cases of auricular fibrillation are not necessarily a contraindication for the use of quinidine. A fibrillating heart restored to normal rhythm increases the cardiac efficiency from 20 to 30 per cent. In many instances, patients with chronic auricular fibrillation and a mild degree of heart failure, due to the irregularity, may be restored to a reasonable normal activity and a useful existence by regulating the heart's action with quinidine.

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(References continued on page 135.)

SHORT WAVE RADIATIONS: MECHANISM OF THE ANTI-INFLAMMATORY EFFECT*

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ON being asked the other day what conditions other than cancer are treated with x-ray, I returned the half-facetious reply, "Acne to zoster and all way points." Half facetious, because although radiologists are often accused of treating uncritically anything at all with radiations*, and perhaps with a measure of justice, the fact remains that a wide variety of completely unrelated inflammatory conditions respond to irradiation with improvement or cure. Unfortunately the mechanism of this response is rather obscure. The following discussion attempts to cover some of the principal physiological actions of radiations as they relate to this problem.

Bell² defines inflammation as "the local defensive reaction that occurs when an injurious agent penetrates the tissues." This definition covers not only conditions caused by bacterial invasion, which we commonly associate with the term inflammation, but also a large group of injuries caused by non-vital agents such as heat, cold, x-rays, ultraviolet rays, contusions, etc. All of the fundamental characteristics of the resulting inflammatory reaction are identical, consisting of vasodilation and increased blood flow to the part, degeneration and necrosis of cells, exudation (a transfer of plasma and leukocytes from within the capillary walls to the tissue spaces), and reaction of the connective tissue cells. There are three possible actions of radiations on this series of events; they may

*For purposes of this discussion, the general terms "radiation" and "irradiation" will refer to the employment of rays having a wave length of 1A or less; that is, x-rays and gamma rays.

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suppress or prevent the further evolution of this process; they may hasten its course; they may lessen its severity.

The action of radiations on inflammatory processes has been variously explained. One of the earliest suggestions was a direct action on the infecting microorganisms. That this explanation is erroneous may be deduced from two facts. In the first place, irradiation benefits some non-infectious inflammatory conditions (such as bursitis, for example) in which no causative microorganisms are present. In the second place, the doses required to kill bacteria in vitro are of the order of 10 to 1,000 times the clinical anti-inflammatory dose. Thus Rahn¹⁷ gives the lethal dose for *B. coli* as 1883r administered in 45 seconds. Russ¹⁹ has demonstrated that while the irradiation of inoculated animals increased their resistance to an infectious disease, identical doses produced no evident effect on the morphology or physiology of the causative bacteria in vitro. Since there is no satisfactory evidence in contradiction, it may be taken that there is no direct bactericidal action under the conditions of anti-inflammatory irradiation, and as for non-lethal effects, the evidence seems against them.

Effects on the blood stream have been considered as a possible explanation. The principal adverse argument is the impression that only treatment localized to the lesion is effective. Wintz²⁰ however, reports "favorable effects have been observed in non-irradiated infected centers far removed from the treated area." There is moreover the added fact that changes in the blood stream following localized radiation have been demonstrated. Rosselet and Humbert¹⁸ have shown a rise in the opsonic index following small doses of irradiation, the maximum rise occurring with a dose of 75r to 150r; further increase in the dosage led to a progressively smaller rise until at a dose of 300r a fall below control levels was observed. The work of Chambers and Russ,⁶ who found a progressive loss of opsonins following alpha radiation of the circulating blood, suggests that this change might be due to an effect on the leukocytes rather than on the blood proper, but they report no effect from beta or gamma radiation. Increase in the blood antitoxic factors has been reported as a result of x-radiation preceding the administration of toxin.³ The exact converse has also been reported.¹² The dosage levels involved probably determined the response, since doses about 30 to 60 times as large were used in the latter experiments. Hektoen¹² states that massive doses of x-ray after immunization have no effect on the antibody level. Brooks⁵ thinks that the experimental work on x-ray effects on antibodies is inconclusive, and that doses up to 5 HED given directly to hemolysins, precipitins, and agglutinins in vitro have no effect. In vivo irradiation has also led to inconclusive results, but he felt a slight protection had been observed. Lusztig¹³ reports at least partial inactivation of alexin (complement) by doses of 1/2-4 HED. That a humoral change distinct from immunity changes is present seems to be indicated by the work of Barnes and Furth,¹ who report that irradiation of the lymphoid tissues of one part of the body leads to changes in remote non-irradiated lymphoid tissues. They attribute this to a "toxic factor" liberated in the blood stream. It is difficult to evaluate this evidence but the conclusion seems warranted that although there is a humoral response to irradiation, it is a minor factor in its clinical application.

Irradiation effects on the exudate, especially the leukocytes, have been for some years considered the principal cause of anti-inflammatory effects (Pordes and Desjardins have been principally responsible for the popularization of this idea). The extreme sensitivity of lymphocytes is well known, and in the course of their disintegration following radiation injury they liberate anti-bacterial substances which lead to the inhibition or

phagocytosis of the bacteria. Evidence that this action takes place seems well authenticated, but it is open to question that this is the sole, or even the most important mechanism. The fact that no response at all is observed in frank abscess would seem to indicate the leukocytic destruction which takes place is a comparatively minor factor. Moreover, the polymorphonuclear cells which are most numerous in most pyogenic processes are not very radiosensitive; while the highly sensitive lymphocytes are a very small minority. It therefore seems reasonable to believe that this action explains only a small part of the observed phenomena.

Vascular effects have only recently been given much consideration as a source of the results of irradiation of inflammations because the small doses used do not give any very well marked vascular change in the intact individual. However, the altered state of the vessels in inflammation makes them more susceptible to radiations. Vascular effects are of major importance. Borak,⁴ in a very well reasoned essay, points out the fact that irradiation produces two effects, a dilatation of the capillaries (or "heat-like effect") and a narrowing of the arterioles and venules (or "cold-like effect"). Both of these tend to decrease the amount of inflammation, the first by increasing the transudation of antibodies, leukocytes, and lymph, and the second by reducing the heat and swelling of the part. Since the venules usually have wider lumens than the arterioles, their narrowing produces little circulatory change, that of the arterioles and capillaries being paramount. The increased transudation of lymph tends to increase the flow in the lymphatic vessels, mechanically diluting and washing out injurious agents. The preceding considerations also explain the harmful action of excessive dosage, since an extreme degree of narrowing in the arterioles would impede or stop the circulation, with the result of increasing the total damage.

Radiations have a number of other effects which probably are of some importance in this regard. There is a decrease of the permeability of the cell membrane with small doses.¹⁵ There is an increase of cell streaming, which is thought to be due to liquefaction of protoplasm; and this liquefaction has been demonstrated in leukocytes. After irradiation of the entire organism there is an increase in serum globulin and a decrease in serum albumin. And most important, there seems to be an increase in cell metabolism as manifested by increased oxygen consumption and carbon dioxide production. Any of these effects might well have some bearing on the observed total effect of radiations. It is, of course, a matter of grave difficulty to transpose the results of experiment into terms of human tissue reactions; and this coupled with the obscure rôle of the above and similar factors, leaves their importance pretty well in the background.

DISCUSSION

The statement is sometimes made that irradiation produces fibrosis and thus interferes with any subsequent surgical procedure. This supposition is based partly on inaccurate observation and partly on misapprehension of fact. It is undoubtedly true that heavy doses of radiation, by destroying the tissues, produce a fibrosis that is nothing more or less than scar formation. Any destructive agent will do this. Non-destructive doses of radiation, however, have the opposite effect; they tend to inhibit fibroblastic activity. Patterson¹⁶ reports loss of axial growth and abnormal cell development with a decrease in mitotic activity in chick fibroblasts in tissue culture following doses ranging from 2,000 to 15,000r. Early and complete recovery followed the lower doses; delayed and incomplete recovery was observed with the higher ones. Immediate death of the culture was not observed in his experiment. Halberstaedter, et al¹¹ report complete in-

TABLE 1.—On Relative Value of Treatments

Treatment Highly Effective	Treatment Moderately Effective	Effectiveness Doubtful	Treatment Useless or Contraindicated
Adenitis, tuberculous	Arthritis, rheumatoid	Bronchiectasis	Arthritis, late, all types
Adenitis, non-specific	Arthritis, infectious	Cystic mastitis	Pulmonary tuberculosis
Arthritis, gonorrheal	Gas gangrene	Osteomyelitis	
Bursitis	Iridocyclitis	Peritonitis	
Carbuncles and furuncles	Mastoiditis; otitis		
Cellulitis; lymphangitis	Pneumonia, lobar		
Condylomata acuminata	Pneumonia, virus		
Dermatitis and dermatoses	Salpingitis, gonorrheal		
Erysipelas	Salpingitis, tuberculous		
Fungus infections	"Sciatica"; "neuralgia"		
Herpes simplex	Sinusitis		
Herpes zoster	Vernal conjunctivitis		
Parotitis, non-epidemic			

hibition of cultures of rat fibroblasts following doses of 20,000r, and Goldfeder¹⁰ gives 20,000r as sublethal and 25,000-30,000r as lethal dose for chick fibroblasts in vitro. Descending into the clinical range of dosage, Lasnitzki¹⁴ reports a decrease of mitotic activity of chick fibroblasts with a dose of 100r, followed by renewal of the mitotic activity accompanied by an increase in the number of degenerate cells. And the clinical observation that irradiation of scars postoperatively inhibits the formation of keloids is beyond question. Therefore an inhibitory action of radiations on fibroblasts in vivo is certain, showing that the action is the direct opposite of what would produce fibrosis; the fear of a fibrosis resulting from anti-inflammatory irradiation is groundless, not to say ridiculous. It must not be forgotten that an inflammatory process may of itself produce fibrosis; this probably accounts for the cases attributed to radiation.

Summarizing, it appears that the beneficial effect of radiations is a very complex process, depending perhaps on the vascular changes for the principal action, but involving as well effects on the exudate, both cellular and liquid, on the blood stream, on cell metabolism, and possibly on still other processes. It is important that as far as we know now, the entire action is on the host, not on the inflammation-producing agent.

The crux of successful treatment of inflammations comes to one thing; proper dose. Heavy doses frequently repeated will make inflammatory conditions worse; yet many, conditioned by their training in cancer therapy, attempt to use just such measures. It can almost be stated as axiomatic that a single dose of 200r is excessive for anti-inflammatory irradiation. The lower limit is by no means so easy to fix. As little as 1r has been recommended for each dose.⁷ My personal preference usually fixes the dose between 50r and 100r, and this is a popular region with most therapists. However, the exact dose for an individual cannot be fixed a priori; the more acute the process, the smaller the dose which should be given in any treatment. Too large a dose will more often flare up an inflammation than improve it. The number of treatments and their spacing is very variable; in general, as few treatments as possible should be given, and they should be spaced 48 to 72 hours apart in most instances, although in very acute processes a spacing of 12 to 24 hours may be preferable. As soon as a definite regression begins, treatment should be stopped. A total dose of about 300r in acute inflammations and 600r in chronic ones is generally maximum. Technical factors may be varied widely with but little change in effect. Low voltage and light filtration are preferable, but in the absence of equipment for this technique 200kv. and ½ mm. copper and 1 mm. aluminum filters can be used successfully. In some chronic conditions, such as tuberculous adenitis, the higher voltage and heavier filter are given preference by many experienced radiologists.

For the purposes of this discussion we are not greatly concerned whether irradiation therapy is the best of all possible treatments for any condition. It is sufficient to

note whether irradiation may be of benefit or not, leaving the decision as to whether some other form of treatment might be more beneficial to be decided by the circumstances of the individual patient. Clearly, it is futile to talk about how much a patient would benefit from penicillin therapy if you can get no penicillin; such a patient might be given irradiation with life saving benefit, even though penicillin, were it available, would be preferred. In certain diseases, of course, irradiation is the treatment of choice. Table I lists some conditions which might be considered for radiation therapy, with a rough classification as to their relative responsiveness; the list is by no means exhaustive.

It is apparent from this list that almost any inflammation may be tried on a regimen of irradiation. The criteria for deciding to use this modality are first, that no better form of treatment is available; second, that irradiation has not proven harmful in the treatment of the disease in question; and third, that a therapist with reasonable judgment and experience is available to direct the treatment. The first criterion is obviously a matter subject to individual opinion. But I do not have in mind differences of 1 per cent which can be demonstrated only by the most painstaking and accurate research; I refer to clearly marked out superiorities generally recognized by the profession. In close decisions it is surely the clinicians right to choose that form of treatment which his previous experience suggests as the most effective. Among those who, observing the above criteria, have employed anti-inflammatory irradiation it has won a deserved popularity.

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WHAT CAN BE DONE FOR THE DEAFENED TODAY*

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CONSIDERABLE publicity has recently been given to the subject of deafness. As a result there has been a deluge of inquiries by both the laity and the profession regarding this subject. This paper is therefore presented to briefly review the etiology, diagnosis and treatment of the various types of deafness.

TYPES OF DEAFNESS

A patient with impaired hearing has one of three types of deafness, namely, conduction or middle ear deafness, perception or nerve deafness, or otosclerosis, which is a combination of both middle ear and nerve involvement. Deafness due to malingering or hysteria is not a true pathological entity, and therefore will not be included in this discussion.

CONDUCTION (MIDDLE EAR) DEAFNESS

Etiology. Any pathology that interferes with the transmission of sound vibrations to the inner ear (cochlea and auditory nerve) results in a conduction deafness. This pathology may be present in the external ear canal, the middle ear, or the eustachian tube. External ear canal obstruction is most commonly due to ceruminosis, furunculosis or foreign bodies. The function of the ear drum may be interfered with by a perforation, edema, or by fibrosis (scars). Sound transmission through the middle ear may be impaired due to ossicular chain pathology, such as dislocation, articular disease, necrosis, or by the presence of fluid, either serous or purulent, in the middle ear. Eustachian tube obstruction results in pressure changes within the middle ear and likewise interferes with sound transmission. Tubal obstruction may be due to altitude changes, inflammatory edema, allergic edema or adenoid hypertrophy.

Diagnosis. The diagnosis of conduction deafness may be made on the basis of subjective findings, objective findings, tuning fork tests and audiograms. The subjective findings in conduction deafness are quite characteristic. The patient usually has a soft-spoken voice, because external noise interference has been diminished, and he therefore hears his own voice very loudly. In conduction deafness, low tones are not heard, and therefore the patient will state he hears better in a noisy environment. This occurs because other people to whom he is talking

are conscious of the noisy environment and speak with more intensity. Crunchy foods sound very loud to the conductive deaf individual. The objective findings in conduction deafness may reveal external ear, ear drum or eustachian tube pathology. A 512 tuning fork placed in the center of the forehead of a conductive deaf patient will be referred to the ear with the greater impairment, due to the exclusion of extrinsic sounds (Weber test). A 512 fork no longer heard when held one inch from the external ear will be heard when placed in contact with the mastoid bone (Rinne test). A reading taken with the audiometer will reveal loss of air-borne tones.

Treatment. Treatment of the patient with conduction deafness depends on correction of the underlying pathology or of furnishing adequate substitution, as the individual case requires. Removal of any external ear canal obstruction is imperative. Correction of any ear drum pathology when possible, such as closure of an old perforation, is very desirable. This procedure is successful only in dry, central perforations. It is accomplished by freshening the edges with a caustic and placing scotch tape over the opening, thus allowing epithelization to occur under the paper. Marginal perforations, unfortunately, cannot be closed in this manner. Conduction deafness due to active middle ear disease necessitates our every effort in an attempt to stop further destruction to the hearing mechanism. If drainage persists in acute otitis media for six weeks, in spite of adequate treatment, it is strongly suggestive of bone necrosis in the mastoid cells. If a prophylactic, simple mastoidectomy is not performed at this time, a chronic discharging ear may result. If the acute ear becomes a chronic discharging ear, a permanent conductive deafness results. If the hearing loss is bilateral and is sufficient to produce difficulty in conversation, then a substitute, such as the artificial ear drum or the hearing aid, becomes necessary.

Artificial ear drums (Pohlman inserts) are indicated in cases of bilateral conduction deafness due to chronic ear disease with partial or total destruction of the ear drum and ossicles. A testing probe is used to determine the sensitive contact point on the medial wall of the middle ear. This area is usually about the oval or round window or over the promontory of the cochlea. When this area is contacted with the testing probe, the patient's hearing will suddenly be markedly improved. The insert of choice is then fitted to the ear canal so as to contact this sensitive area. If this area cannot be contacted by the insert, due to drum or ossicular remnants, an ossiculotomy may be necessary. Artificial drums are of several types, such as the cotton pledget, the cellophane cone, moulded rubber (Korogel) and the diaphragm rod. The choice in a given case depends on the tolerance of the individual, whether the ear is moist or dry and on which insert gives the greater decibel boost in the conversational range of hearing (512 to 2048 vibrations per second). Improvement of twenty to thirty decibels is obtained in selected cases by the use of the artificial drum. In these instances, the results obtained are most satisfactory, in that the necessity for an electrical aid is eliminated and the transmission of normal tone sounds is made possible. The patient is taught to make the artificial drum and to remove and replace it as desired.

All persons with conductive deafness can hear with the magnification of sounds made possible by the electrical aid. When other means fail, the electrical aid serves this type of deafness very well. Its disadvantages, such as the cosmetic effect—with the resultant psychological manifestations, the battery nuisance, and the telephone type of transmitted tone, are well known.

Altitude changes and upper respiratory infections frequently result in obstruction of the eustachian tube, due to edema or accumulated mucoid material. If the tube

* Read before the Postgraduate Conference of the Alumni Association of the College of Medical Evangelists.

does not open spontaneously, an inflation or two will usually clear the lumen and restore hearing.

Allergic edema of the tube may result in a prolonged bilateral conduction impairment. In these cases, there is usually an associated allergic rhinitis. The deafness is temporarily relieved by inflation and by the subcutaneous injection of adrenalin, as can be illustrated by audiograms taken before and 20 minutes after its administration. The amount used should be just sufficient to produce an increased cardiac action. After the diagnosis of an allergic tubal obstruction is made, a complete allergic study, followed by the necessary desensitization, is indicated in all cases.

Lymphoid hypertrophy in the nasal pharynx is a frequent cause of conduction deafness in children. Any child with a conduction impairment without evidence of acute ear disease is entitled to a thorough adenoidectomy. Following surgery, adequate radiation therapy should be given to the nasopharyngeal area to further eradicate every vestige of lymphoid tissue. I have seen cases in this classification obtain a 30 decibel boost bilaterally after such treatment.

PERCEPTION (NERVE) DEAFNESS

Etiology. Any pathology which interferes with the function of the cochlea or the pathways of the auditory portion of the eighth nerve results in perception or nerve-deafness. These include allergy (edema of the cochlea), infection (labyrinthitis), toxemias, drug (alcohol, quinine, etc.), nervous system disease (multiple sclerosis, syphilis, eighth nerve tumors), hemorrhage, industrial trauma (exposure to a continuous noise level) and skull fractures which involve the temporal bone. Congenital malformation of the auditory pathway is not an uncommon cause of nerve deafness.

Diagnosis. Subjectively the perceptive deaf patient speaks loudly because he does not hear his own voice. Noisy environments markedly interfere with the patient's ability to hear. Objectively the examination may fail to reveal any evidence of ear pathology. A 512 tuning fork placed in the center of the forehead is referred to the ear of lesser impairment. A 512 fork no longer heard when held one inch from the external ear will likewise not be heard when held in contact with the mastoid bone. Readings taken with the audiometer will reveal loss of both air and bone borne tones in approximately the same degree. In contrast to conduction deafness, high tones disappear first in nerve deafness.

Treatment. Generally speaking, the treatment of perceptive deafness is for the most part unsatisfactory. Once the nerve is damaged, it shows little inclination to regenerate, and therefore treatment is directed to prevent further nerve loss. A complete history and a thorough physical examination are indicated in all cases to eliminate every possible underlying cause. The use of massive doses of thiamine chloride has been advocated by many writers. In my experience, the results have been discouraging. The hearing aid is of marked benefit unless the nerve function has been destroyed beyond the point of serviceable hearing. Rehabilitation and the development of the art of lip reading become essential for those with a marked nerve loss. If the loss is congenital, proper speech training beginning in the pre-school age is absolutely imperative.

OTOSCLEROSIS

Etiology. The pathology of clinical otosclerosis consists of a developmental proliferation of bone involving the area about the footplate of the stapes and the oval window. The exact cause of this proliferation is not known, other than it is hereditary in nature.

The incidence of otosclerotic changes in the labyrinthine capsule is very high and is often found at autopsy in persons never known to be deaf. How many persons go through life with otosclerosis which never manifests itself by involving the stapes footplate is not known, but is estimated at 10 per cent. Otosclerosis accounts for 65 per cent of all deafness in this country.

Diagnosis. The diagnosis of otosclerosis may be extremely difficult. Usually otosclerosis is characterized by a progressive bilateral loss of hearing involving first the conductive and later the perceptive mechanism. It becomes apparent in early adult life and is frequently associated with tinnitus. There may or may not be a positive family history of deafness. Frequently the patient has some reason for deafness, such as trauma, childhood disease, or a recent upper respiratory infection. This, unfortunately, may cause the examining doctor to err in the diagnosis of otosclerosis.

A very thorough examination of the entire ear mechanism will fail to elicit any cause for the patient's impairment. The eustachian tubes inflate readily, the ear drums appear thin and translucent, and no apparent pathology can be noted. Interestingly enough, one seldom finds cerumen in the external ear of a patient with otosclerosis.

By the time the patient seeks medical aid, an audiogram will reveal a bilateral conduction loss of twenty-five to fifty decibels, with or without evidence of nerve involvement.

Any progressive bilateral hearing impairment occurring in early or middle adult life, which on examination does not present evidence of ear pathology, very strongly suggests otosclerosis. This coupled with a co-existent tinnitus and a family history of deafness is almost diagnostic of otosclerosis.

Treatment. Perhaps no other group of individuals has been subjected to more treatment without benefit than has the unfortunate patient with otosclerosis. Repeated eustachian tube inflations, nose treatments, nose and throat surgery, ear drum massage, various diets, endocrines, vitamins and minerals all have been put through their paces without noticeable benefit. When benefit has been derived, one is led to believe the diagnosis of otosclerosis was in error, for it is difficult when one visualizes the underlying pathology to understand how such therapy could have much reward.

Some seventy years ago an otologist by the name of Kessel had a patient who was suffering from otosclerosis. The patient subsequently heard normally in one ear following a skull fracture involving the temporal bone. Years later an autopsy revealed an open crack in the bone over the patient's intact membranous labyrinth. This led to considerable experimental work in creating surgically an opening in the osseous labyrinth. It was noted all otosclerotics heard well as soon as this opening was made, providing their nerve function was capable of transmitting the sound to the brain. Likewise, as soon as the bony opening closed, their hearing dropped back to its original level.

Passow, Jenkins, Barany, Holmgren and Sourdille are prominent names in the history of otosclerotic surgery and each made his contribution.

Some ten years ago Doctor Julius Lempert** developed the first satisfactory surgical technique which could be employed routinely in these cases.* Since then he has modified the procedure on several occasions until now the bony window made over the labyrinth remains permanently patent in some 65 per cent of the cases operated. If the opening closes, it will usually do so within the

* Ed. Note. For special article on "Fenestration Operation for Deafness," by Robert C. Martin, M.D., see CALIFORNIA AND WESTERN MEDICINE, June, 1945, page 311.

** Fenestra Nov-Ovalis, Julius Lempert, Archives of Otolaryngology, Jan. 1945, Vol. 41, pp. 1-41.

first six months after surgery. Oddly enough, if the opening closes once, the chances are it will close again if reopened. However, because the opening has closed in one ear is no indication it will close if the other ear is operated. We have no way of knowing beforehand which cases are going to close and which will remain open. Considerable research is being conducted at the present time in an attempt to discover some means of keeping the bony opening patent in all cases. Gold burnishing, saucer-shaping the fenestra, metal and cartilage inserts, etc., have all been used, and none has proven infallible.

As one may well realize, surgery of this type is very delicate and exacting. Fortunately the incidence of serious complications is less than 2 per cent. These complications include labyrinthine damage from injury or infection, facial paralysis, meningitis, etc. There have been no deaths directly attributable to the operation up to the present time.

It has been noted the nerve function of the successfully operated otosclerotic seems to remain at its pre-operative level instead of gradually deteriorating, as in the unoperated case. This has not been satisfactorily explained, for it is obvious the surgery in no way influences the disease of otosclerosis but merely short-circuits the involved area so far as the hearing mechanism is concerned. It is thought the progressive nerve loss in the unoperated otosclerosis may be on the basis of a disuse atrophy.

Today the patient with otosclerosis has but one of two choices when the hearing loss becomes pronounced. One is to turn to the hearing aid and the other is the fenestration operation. The hearing aid, within its limitations, will give very satisfactory results in early otosclerosis. Ultimately, if the patient lives long enough and if the otosclerotic process advances to involve the nerve beyond the conversational range, even the hearing aid is of little or no value, and the patient must turn to rehabilitation and lip-reading, just as in the case of far-advanced nerve deafness.

The fenestration operation is indicated in any case of otosclerosis in which the ear drum is intact and the nerve function is capable of transmitting the normal ranges of conversation to the brain. The degree of nerve function present is determined by tuning fork tests and audiometric readings. If the patient has these qualifications, the fenestration operations offers a 60 per cent chance of having serviceable hearing permanently restored. Barring complications, if the fenestra should close postoperatively, the patient's hearing will drop to its previous level. In this event, either the same ear can be reoperated, the opposite ear can be operated, or the patient may turn to the hearing aid and hope his eighth nerve outlives his need for its function.

It is the hope of all of us performing this surgery that some means will be found to keep the newly-created fenestra open in all cases. When this is accomplished, the patient with otosclerosis will have little cause to fear the future.

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Charles Dickens (1812-1870).—The sickly, sensitive child was father to the restless, overwrought man. Exhaustion, insomnia, failing sight and memory, these were the physical infirmities that burdened Dickens during the latter years of his productive career. In 1864, he became afflicted with a lameness that grew steadily worse. In 1865, he was in a railway accident. Though able to aid those more badly injured than he, he suffered from the shock incurred. In "Edwin Drood" there are unmistakable signs of his dimming faculties.—*Warner's Calendar of Medical History.*

CLINICAL NOTES AND CASE REPORTS

SULFAPYRIDINE AS A HEMOSTATIC AGENT

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It is not generally known that powdered sulfapyridine applied locally is a very effective hemostatic agent. In 1942 Cunningham¹ reported on its use. He found that the instillation of sulfamethylthiazole powder in the operative wound after radical external frontal sinusotomy for frontal bone osteomyelitis prevented the usual considerable postoperative oozing. This observation stimulated him to experiment on guinea-pigs. He made circular wounds on the backs of the animals and five to seven days later, he evulsed the scabs so that an open granulating and freely oozing surface remained. Using a powder blower he sprayed powdered sulfapyridine, sulfanilamide, sulfathiazole, sulfamethylthiazole and talc on the wounds. The wounds treated with sulfamethylthiazole and sulfapyridine stopped oozing at once while the wounds treated with the other powders and the control wounds, all continued to ooze for from five to ten minutes. The sulfapyridine and sulfamethylthiazole powders also proved to be bacteriostatic. These results led Cunningham to employ powdered sulfapyridine and sulfamethylthiazole by insufflation in the control of postoperative secondary tonsillar hemorrhage with excellent results.

Stimulated by Cunningham's report, I have used it extensively in a dermatologic practice. Occasionally after electrodesiccation or electrocoagulation of a cutaneous lesion, separation of the eschar will be followed by an annoying persistent bleeding. This is especially so after removal of a carcinoma or keratosis of the lower lip where the frequent movements of the lip tend to prematurely force the separation of the eschar. The application of sulfapyridine powder will instantly control this bleeding. I now routinely apply sulfapyridine powder to all wounds after removal of cutaneous lesions by electro-surgery or cautery. The surfaces of the wounds become hard and dry and heal without infection. The sulfapyridine powder is also very useful in the treatment of bleeding abrasions of the skin.

The use of sulfapyridine powder as a hemostatic agent can be extended into other specialties besides those of dermatology and otorhinolaryngology. The dentist and the general practitioner should find it extremely useful.

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Voltaire (1604-1778).—Born of a tuberculous mother, the great forerunner of the French Revolution, at one time imprisoned in the Bastille, complained throughout his life of a formidable list of maladies which he sometimes used as a shield against his enemies. Excessively thin from childhood, he became a mere skeleton in old age. Yet he was possessed of untiring energy and an extraordinary capacity for work. Poet, dramatist, philosopher, Voltaire remains a commanding figure in literature. When he died only three words were needed on his tombstone: "Ici repose Voltaire."—*Warner's Calendar of Medical History.*

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This department contains official notices, reports of county society proceedings and other information having to do with the State Association and its component county societies. The copy for the department is submitted by the State Association Secretary, to whom communications for this department should be sent. Rosters of State Association officers and committees and of component county societies and affiliated organizations, are printed in the front advertising section on pages 2, 4 and 6.

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OFFICIAL NOTICES

Proposed Amendment to C.M.A. Constitution Re: Ex-officio Members of Council

For action taken on this resolution, see below.

Be It Resolved, That the first paragraph of Section 1, Article VII, of the Constitution of the California Medical Association be amended to read:

"The Council shall consist of the Councilors, and ex-officio: The President, the President-elect, the Speaker and Vice-Speaker of the House of Delegates, each with all the rights of a Councilor."

and, be it

Resolved, That the first paragraph of Section 4, Article X of the Constitution of the California Medical Association be amended to read:

"The President, President-elect, the Speaker and Vice-Speaker of the House of Delegates shall be ex-officio members of the Council with all the rights of Councilors."

SPEAKER ASKEY: This is an Amendment to the Constitution and By-Laws and must lie on the table for one year and must be published twice during the year in the *Official Journal*. It is so referred to the Association Secretary to be laid on the table and published as required by the By-Laws.

(For reference in minutes of House of Delegates, see JUNE CALIFORNIA AND WESTERN MEDICINE, page 327.)

COUNTY SOCIETIES†

CHANGES IN MEMBERSHIP

New Members (5)

San Bernardino County (1)

Wilson, William H., San Bernardino

San Diego County (2)

Berry, Herbert Lee, San Diego

Lundegaard, E. E., San Diego

San Francisco County (1)

Ould, Carlton Lee, San Francisco

San Mateo County (1)

Gish, Rex A., Redwood City

Retired Members (3)

Coleman, Barney E., Los Angeles County

Garrison, J. F., Los Angeles County

Hosmer, Charles Morton, San Diego County

In Memoriam

Baker, Richard Wortman. Died at Pasadena, August 8, 1945, age 82. Graduate of Beaumont Hospital Medical College, St. Louis, Missouri, 1893. Licensed in California in 1921. Doctor Baker was a Retired member of the Los Angeles County Medical Association, the Cali-

† For complete roster of officers, see advertising pages 2, 4, and 6.

† For roster of officers of component county medical societies, see page 4 in front advertising section.

fornia Medical Association, and an Affiliate Fellow of the American Medical Association.

♦
Campbell, Henry Sutherland. (Major, United States Army.) Died at Los Angeles, July 7, 1945, age 55. Graduate of McGill University Faculty of Medicine, Montreal, 1920. Licensed in California in 1926. Doctor Campbell was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

♦
James, Lloyd Bertram. (Captain, United States Army.) Killed on Tinian Island, July 3, 1945, age 39. Graduate of the College of Medical Evangelists, Loma Linda, 1932. Licensed in California in 1932. Doctor James was a member of the Fresno County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

♦
Murdock, Edgar Paul. Died at Santa Maria, June 24, 1945, age 60. Graduate of Bennett College of Eclectic Medicine and Surgery, Chicago, 1909. Licensed in California in 1944. Doctor Murdock was a member of the Santa Barbara County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

COMMITTEE ON INDUSTRIAL PRACTICE

Surcharge Order of Industrial Accident Commission

Acknowledgment of the 15 per cent surcharge order of the Industrial Accident Commission on compensation cases is apparently becoming more prevalent on the part of the insurance carriers in California. Some of the carriers resisted this order at first but have since accepted the Commission's order and adopted the policy of paying the 15 per cent wartime surcharge.

Latest evidence of acceptance of the surcharge order comes from Pacific Employers Insurance Co., which had deducted the 15 per cent surcharge from a physician's statement but paid the full amount when the California Medical Association proposed to take the matter before the Industrial Accident Commission. Payment of the full amount of the statement reemphasizes the stand of the Industrial Accident Commission in backing up its orders; the Commission has stated that it would enforce its order for the 15 per cent surcharge and it has done so when cases of refusal to pay the surcharge have been placed before it.

This latest case serves as an additional reminder that physicians who have been refused the 15 per cent surcharge by insurance carriers can obtain their full fees by placing the facts before the California Medical Association; the Association is prepared to furnish legal counsel for presenting demands for full payment to the Industrial Accident Commission. In each case handled in this way to date the full amount of the fee has been obtained.

The Association is now preparing a new request for adequate medical and surgical fees for compensation cases for presentation to the enlarged Industrial Accident Commission. It has also requested a special interim committee of the State Legislature to enter this subject on its agenda for a full hearing. The C.M.A. Council has authorized its special fee schedule committee (Philip K. Gilman, M.D., Hartley F. Peart, Esq., and John Hunton) to continue its efforts to obtain fair and adequate fees for compensation services. The committee intends

to continue using every avenue of approach in securing an adequate fee schedule, including direct appeals to the Industrial Accident Commission, testimony before the interim committee of the Assembly and conferences with insurance executives.

Correspondence resulting in the latest payment of the full fee, including the 15 per cent surcharge, is reproduced here as an indication of the reasoning impelling acceptance of the surcharge by the insurance carriers.

Pacific Employers Insurance Company
Los Angeles

Peart, Baraty & Hassard, August 17, 1945,
111 Sutter Street, Claim No. _____

Gentlemen:

Thank you for your letter of August 13, 1945. I am attaching herewith our draft which pays Doctor _____ (name)'s bill in full in connection with the above entitled matter.

Yours very truly,
/s/ CHARLES JONES,
Superintendent of Claims.

Peart, Baraty & Hassard
Attorneys-at-Law
111 Sutter Street
San Francisco, California

_____, M. D. August 20, 1945.
_____, California.

Dear Doctor _____:

We enclose check No. _____ of Pacific Employers Insurance Company to your order in the amount of \$_____.

Upon receipt of our letter returning the old check, Pacific Employers forwarded the enclosed. A copy of their letter is also enclosed.

They evidently thought it advisable to pay you the 15 per cent increase authorized by the surcharge order rather than have you file a claim with the Industrial Accident Commission.

In the event this company or any other company should reduce your bill in this fashion again, we would like to hear from you as we feel confident the Industrial Accident Commission will enforce its surcharge order if it is brought before them.

Very truly yours,
PEART, BARATY & HASSARD,
/s/ Hartley F. Peart.

Industrial-Medicine Program in Philadelphia

As an early step in the Philadelphia program, the Philadelphia County Medical Society offered a 48-hour course of instruction on industrial medicine to doctors and nurses. Sixty physicians attended. To them and to the nurses was explained the theme of the project:

"To keep a well worker in every job and to safeguard him so that his working environment cannot strike at his life or his health."

Next, the Pennsylvania State Department of Health made a survey of Philadelphia industries to determine how many of the more than 5,500 manufacturing establishments had medical service. It was found that those with 500 or fewer persons on the pay roll were "woefully ill equipped or completely lacked any medical service."

It was found, coincidentally, that 90 per cent of the city's industrial workers were employed in small plants.

To tell small industry how to tackle a health project, the Philadelphia Chamber of Commerce printed a pam-

phlet. Simply written in question and answer form, and free to all who were interested, the booklet advised these optional plans:

1. Hiring, on an hourly basis, of a general practitioner interested in industrial health, his work perhaps to be supplemented by calls from visiting nurses.

2. Hiring of a physician whose full time is devoted to industrial health and who makes scheduled visits from company to company. Rates for this type of doctor are likely to be lower because the physician, by having only an industrial practice, eliminates such things as office expenses, tardy accounts, 24-hour duty, fluctuation of income, etc.

3. Operation by a physician of a dispensary in a building housing several industries, the dispensary being supported on a *per capita* subscription basis.

4. Opening of a central dispensary in a neighborhood of small industries, the dispensary to be staffed by a physician and a full-time registered nurse.

5. The management of a factory building containing several industries contracts with a physician to supervise a dispensary in space set aside by the management.

As for the very vital matter of costs, the booklet says that they will vary widely according to type of industry, the number employed, accident rate, total of workers exposed to serious occupational disease hazards and, of course, the extent of health services contemplated.

Concerning supplies, the booklet states:

"It has been a matter of experience that in a dispensary not equipped for x-ray and laboratory work, the supplies will cost about \$20 a month for a plant of 100 employees; \$60 for one with 500 employees."

COMMITTEE ON MEDICAL ECONOMICS

California State Board of Equalization Changes Ruling Regarding Sales Tax on X-Ray Films

Important Notice

California physicians, particularly those specializing in x-ray procedures, have been cheered to learn of the changed ruling of the California State Board of Equalization regarding sales taxes on x-ray films. The Board had originally ordered that sales taxes must be paid on the fair value of films used in x-rays; in some instances the Board had demanded that radiologists take out retailers' licenses and report regularly to the Board on the value of films used in their procedures, collecting sales taxes on these films from their patients and remitting such taxes to the Board of Equalization.

Upon presentation of legal reasoning which pointed out that the radiologists were not in the business of selling tangible personal property but were actually engaged in a professional procedure, the Board changed the original ruling. As the rule now stands, sales taxes are due and payable on the fair retail value of x-ray films *only* where the film is actually transferred in retail trade. So long as title to the film remains with the radiologist, no sales tax is due and payable.

The original Board ruling was apparently made at the insistence of lay radiographic laboratories which undertake to make x-ray plates and deliver them to purchasers without any professional reading, analysis or diagnosis.

References to article, "Quinidine." Continued from p. 125.

19. Kerkhof, A. C., and Bauman, H.: Minute Volume Determinations in Mitral Stenosis During Auricular Fibrillation and when Restored to Normal Rhythm, *Proc. Soc. Exper. Biol. and Med.*, 31:168-170, 1933.

20. Hirschfelder, A. D.: *Disease of the Heart and Aorta*, J. B. Lippincott Company, Philadelphia and London, 1918.

The lay operators claimed a discrimination against their laboratories in favor of physician radiologists who perform a professional service which includes the taking and reading of x-ray films.

Arguments against the original Board ruling were based on the fact that the professional radiologist makes x-ray plates as a part of a professional diagnostic service, that these plates are not sold at retail to either the patient or another physician, even though they may be submitted as a part of an opinion, and that the fee charged by the radiologist is a professional fee for services rendered in a diagnostic procedure. The change in the Board's ruling followed this reasoning. The new ruling holds, in effect, that sales taxes need be paid only where there is a delivery of x-ray film at retail and where title to the film is transferred.

In line with long-established practice, diagnostic procedures do not involve the transfer of title to material aids. The courts have long held that the x-ray plate is the property of the physician and not of the patient. In the case of a radiologist specialist, title to the film remains with the radiologist, even though the film itself may be loaned to another physician as a material aid in diagnosis. The radiologist is still performing his professional function of diagnosis and there is no sale of property.

Radiologists are advised by our general counsel to use an ownership statement attached to x-ray plates or made a part of the transparency. Such a statement would further demonstrate that the plate is the property of the radiologist and is a part of his files. Under the Board of Equalization's new ruling there is no need for the radiologist to take out a retailer's license or to report sales taxes on any portion of his professional fee. (Note. For other reference, see page 152.)

CALIFORNIA PHYSICIANS' SERVICE†

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The Board of Trustees of C.P.S. held its regular meeting on July 15, 1945, in Los Angeles.

The board concerned itself with recent developments in the problems of prepaid medical care which have developed as a result of the legislative session. Aside from the major issue of compulsory health insurance, there were various other bills that were introduced into the Legislature which might have affected the organization of C.P.S. indirectly. The board was advised that most of these had the same fate as the compulsory health insurance bills. Concern was evidenced in the closeness of the final vote and also toward the continued active in-

† Address: California Physicians' Service, 153 Kearny Street, San Francisco. Telephone EXbrook 0161.

Copy for the California Physicians' Service department in the OFFICIAL JOURNAL is submitted by that organization through W. M. Bowman, Executive Director.

terest of committees of both the Senate and the Assembly during the coming year.

An interesting report was presented by the liaison member to the board from the C.M.A. on a meeting of representatives of the medical associations of the western states. Of particular interest to the Board of Trustees was the report given by Dr. L. Fernald Foster, Secretary of the Michigan Medical Society, who has had close contact with the creation and the development of the Michigan Medical Service. His report reviewed the difficulties surrounding the development of a medical service plan. It was of great interest to hear the experiences of the Michigan Medical Service from 1939 up to the present time. During this period, there was very little contact between the Michigan plan and the California plan, but the experiences of Michigan as outlined by Dr. Foster were astonishingly similar to those experiences that California Physicians' Service had during the same period of time. The report clearly set forth the fact that the two leading plans of the country—Michigan and California—went through many periods of trial and error, but that the difficulties encountered are not insurmountable where proper evidence of the backing of the medical profession to those plans is present.

In the regular business of the board, it was reported that the month of June resulted in the acquisition of 13,820 new members. The California State Employees' Association alone brought in over 2,100 new members. It is significant that this organization of State employees, which was one of the first groups to join C.P.S., has maintained its membership in increasing numbers since the early beginnings.

It was also reported to the Board of Trustees that over 95 per cent of the membership have been notified of the rate increase, and that as of July 1st, 75 per cent will be paying this increased rate. During the entire procedure of the rate change, there has been a negligible loss of membership due to the change.

It was also pointed out to the board that there are beginning to be indications of increasing labor turn-over, as evidenced by the lapse ratio in membership. At the present writing, due to the war's end, this problem will rank as the major one for the coming year. Its extent and effect upon the affairs of C.P.S. cannot be predicted, but it is logical to assume that it will handicap plans for expansion considerably.

The Fee Schedule Committee which was set up by the Board of Trustees presented its final report. This report indicated that in general the fee schedule was satisfactory to the profession at large, and that no major changes were recommended. Several specific items in the schedule were altered, and many new items included because of change in techniques and procedures in the past year or so. The Fee Schedule Committee has suggested that study be given to the possibility of a differential fee for Diplomates of their Specialty Boards. This was discussed by the board, with consideration of the over-all effect on professional relations and the effect of such a change on C.P.S. from an actuarial point of view. No decision was made, and the subject remained open for further study and investigation.

Reports were given to the board on negotiations that are under way with several large groups and State-wide groups, which is evidence of the interest of this type of organization in acquiring prepaid medical care, and which has been given impetus by recent legislative discussions and the publicity that they provoked.

At this meeting the Board of Trustees was presented with the resignation of Dr. T. Henshaw Kelly. The resignation was accepted with regret.

CHESTER L. COOLEY, M.D., *Secretary.*

CALIFORNIA COMMITTEE ON PARTICIPATION OF THE MEDICAL PROFESSION IN THE WAR EFFORT

Information for Medical Officers

With the termination of the war in Europe, many medical officers in that theater are in doubt as to their future assignments. Many physicians have apparently written to the A.M.A. under the impression that that organization could do something about it. The *Journal* says:

"The American Medical Association—and this statement is made wholly in explanation of a fact that should be obvious to everyone—does not have authority to determine in any way the assignments of physicians in the armed forces. The officers of the Association would be hesitant to interfere in the making of decisions as to the assignments or transfer of men in the armed forces. The decisions as to how military personnel are to be utilized must rest with those who carry the responsibility for the ultimate results. This statement is made because many a medical officer has written to the headquarters of the American Medical Association actually demanding that the Association exert its influence to determine the decisions, not only to those responsible for the medical departments of the armed forces, but even of the Secretaries of War and Navy, of the Committees on Military Affairs of the legislative bodies, and even of the President. The Board of Trustees and the Officers of the Association have felt keenly, nevertheless, the responsibility that rests on them to present to those in authority the facts that should be given serious consideration in the making of decisions concerning medical personnel."

Some physicians have also written to the A.M.A. protesting against the possibility that they may be assigned on their release from service with the armed forces to the Veterans Administration. On their behalf, the A.M.A. Committee on Postwar Medical Service on May 12 took prompt action and sent to the Secretary of War, the Secretary of the Navy, and the Committees on Military Affairs of the House of Representatives and the Senate the following:

"In November, 1944, the Army Medical Department was directed to transfer at least three hundred medical corps officers to the Veterans Administration, this number to include those officers in the zone of the interior who were formerly employed by the Veterans Administration as civilians. Apparently about one hundred men meeting the latter classification were so assigned and in addition some two hundred others selected largely from among men who had been marked 'limited service.' Many of those thus assigned have protested and others are now protesting bitterly against these assignments on the ground that their enlistment was distinctly for military service and that assignment to the Veterans Administration cannot be thus characterized. Many physicians who have served with distinction in both the European and the Pacific theaters of operation are now indicating by communications addressed to the headquarters of the American Medical Association the fear that they may be assigned on their return to the United States to service with the Veterans Administration. The unwillingness to serve with the Veterans Administration is based not only on their belief that this cannot be considered military service but also on the point of view that competent, scientific medical care is difficult under the conditions that prevail in the veterans' hospitals.

"The Committee on Postwar Medical Service, which includes representatives of the American Medical Association, the American College of Surgeons, the American

College of Physicians, the American Hospital Association, the Federation of State Medical Licensing Boards, the Association of American Medical Colleges, the Catholic Hospital Association, the Advisory Board of Medical Specialties, and many other groups, after careful consideration of the problems involved, urges that the Secretary of War, the Secretary of the Navy, and all others concerned with the activities of physicians voluntarily enlisted in the armed forces recognize the righteousness of the protests made by these medical officers against assignment to the Veterans Administration. It is further urged that the needs of the Veterans Administration for physicians be met either by voluntary enrollment of men in the armed forces at the time of their release from the service or by recruitment of medical personnel from civilian sources."

It is quite understandable that many physicians, under the circumstances, would be unwilling to serve in the Veterans Administration not because they are reluctant to care for the veteran but because, as stated, and as seems to be borne out by recent allegations from many sources, "competent, scientific medical care is difficult under the conditions that prevail in the veterans' hospitals."

Surgeon General Kirk, in a telegram to the A.M.A., has stated

"The policy of the War Department and of my office is that when medical officers are returned to the United States on rotation or redeployment they will be assigned to duty according to their specialties. They will replace officers with similar qualifications who have not had opportunity for foreign service."

This information should answer some of the questions being asked by medical officers. Reassignment and redeployment is a function of the office of the Surgeon General.—"New York State Journal of Medicine," Vol. 45, No. 15.

Medical Officers' Discharge to be Based on Point System

Establish Definite Score for Scarce and Non-Scarce Specialists; Officers With Rating of 100 Eligible For Release

The Office of the Surgeon General, U. S. Army, announced recently, as reported by *The Journal of the American Medical Association*, a point system for the discharge of medical officers.

The August 11 issue of *The Journal* says that the separation plan of the Surgeon General, drafted after several months work, had to deal not only with numbers but also with classes of personnel.

"On the basis of detailed studies," the Surgeon General's announcement said, "it was decided that it would be best to establish two classes—one for scarce specialists, the other for non-scarce specialists and general duty officers—and to set a definite score for each, so as to keep under strict control the outflow of scarce specialists."

To deal with the separation problem for medical officers, the Surgeon General established a representative Separations Board.

The Board decided to establish definite criteria for separation subject "to the limits of military necessity which governs all discharge policy." It stressed the fact, however, that "these criteria create no vested right in any officer to discharge, but constitute the goal to be sought," then added: "Such necessity may arise from the possible need for a relatively few officers with irreplaceable experience whose usefulness is so great as to transcend individual consideration."

The criteria for separation from service follow:

1. Medical Corps officers returned by a theater or declared surplus by a major force (except those with pri-

mary military occupational specialties listed in paragraph below) are eligible for release from active duty if their Adjusted Service Rating is 100 or above.

2. Medical Corps officers in certain scarce military occupational specialties are eligible for release from active military duty if they have an Adjusted Service Rating of 120 or more: Gastroenterology, Ophthalmology and Otolaryngology, Cardiology, Dermatology, Allergies, Anesthesia, Neuropsychiatry, Neurosurgery, Thoracic Surgery, Plastic Surgery, Orthopedic Surgery, Clinical Laboratory.

3. Medical Corps officers over 50 years of age, irrespective of their specialty classification, are eligible for relief from active military duty if they are returned to the United States by a theater or declared surplus by a major force.

4. No Medical Corps officer with an efficiency index of 41 or more who desires to remain on active military duty will be relieved, irrespective of age, military occupational specialty or Adjusted Service Rating.

The Board explained that paragraph four is "in keeping with the spirit of readjustment regulations which provide that individuals who desire to remain on active duty will be given every consideration."

Continuing, the announcement said:

"Because of the fact that the general hospitals in the United States are now at peak and because the Surgeon General desires to send replacements to the Pacific as quickly as possible, the age provision is not being put into effect at the moment for personnel in the Army Service Forces, and no Medical Corps officers in the non-scarce category is being released who has less than 110 points (except those who returned from overseas since V-E Day). However, it is hoped that when more of the surplus personnel is returned from the European and Mediterranean theaters, this temporary expedient can be lifted. . . .

"These are only general rules and are subject to exception in any case due to military necessity, and to change if subsequent developments should make such action necessary. They are not to be understood as creating any right in an officer to continue on duty in this country if military needs now or later should require his assignment to other duty. . . .

Streptomycin Being Studied

A new drug, streptomycin, companion to penicillin as a killer of bacteria is being studied and undergoing tests by the Army Medical Department to determine its suitability as a germ killer in saving the lives of wounded and sick American soldiers.

The new drug shows possibilities which may prove to be as important to the medical profession as was the discovery of penicillin. Streptomycin is a killer of gram-negative bacteria, such as tuberculosis, cholera, dysentery, typhoid, tularemia and salmonella food poisoning. Penicillin is a killer of gram-positive bacteria, such as pneumococcus, streptococcus, staphylococcus, gonococcus and syphilis.

The new drug is still in the laboratory stage.

Streptomycin and penicillin resemble each other in many respects. Experience gained in the production of penicillin will aid materially in the production of the new drug. The production process, however, is slow and tedious and it will be some time before the drug is available in any quantity. It took more than two years to bring penicillin into production for general use.

Dr. Selman A. Waksman of the Department of Microbiology of the New Jersey Agriculture Experimental Station at Rutgers University, New Brunswick, New Jersey, is given credit for the discovery of streptomycin. Ever since the discovery of penicillin, Medical Department and civilian bacteriologists as well as Army and commercial laboratories have been searching for a drug that would fight the diseases that penicillin cannot cure. Dr. Waksman reported that he had discovered streptomy-

cin and had reported on it some twenty-nine years ago during experiments with soil bacteria.

3,000 Fliers Lost in B-29 Attacks on Japan

Guam, Aug. 17 (AP).—General Spaatz disclosed today that the year long operations of B-29's against Japan cost the lives of over 3,000 American fliers, while more than 600 others were rescued by naval operations.

Combat operations resulted in the loss of 437 of the Super Fortresses. Noncombat losses were not announced, but they are known to be considerable, particularly in the early months of the campaign when the crews were learning the capabilities of their planes.

Crews lost, averaging eleven men each, numbered 297....—San Francisco *Call-Bulletin*, August 17.

Military Surgery Volume Proposed

A group of the best manuscripts dealing with military surgery are being compiled by the Surgical Consultants Division of the Office of the Surgeon General for the information of surgical officers in Pacific Theaters of Operations.

The selection of the papers to be used will be made from those that have been prepared by Medical Corps officers and submitted to the Division for review and approval for publication.

It is anticipated, when compilation of the papers is completed, that they will be offset printed and contained in a single volume. Upon completion of the volume it is planned to distribute copies to medical installations in the Pacific.

U.S. Army Casualties 161,839 Against Nips

Washington, Aug. 11 (AP).—The war against Japan cost the Army 161,839 casualties up to the early part of June, the War Department disclosed today.

A breakdown on casualties by theaters as reported to June 30 and reflecting fighting through early June showed total casualties of 912,390.

The 161,839 casualties, including 35,810 dead, were suffered in the Alaska, China, India-Burma and Southwest Pacific theaters and Pacific Ocean areas.

The breakdown:

	Killed	Wounded	Missing	Prisoners	Total
Alaska	769	922	45	10	1,746
Caribbean					
(Including					
South					
Atlantic) ..	51	9	0	1	61
China	94	83	145	38	360
European	116,044	369,160	14,126	76,378	575,708
*India-Burma					
(Including					
China-Burma-					
India prior to					
Nov. 1, 1944	1,671	2,256	981	317	5,225
Mediterranean	38,174	106,932	6,015	19,978	171,099
Middle East ..	1,212	571	250	1,650	3,683
*Pacific Ocean					
areas	9,725	31,619	4,050	102	45,496
Southwest					
Pacific					
(Including					
1941-1942					
action in					
Philippines	23,551	54,582	13,196	17,683	109,012
TOTAL	191,291	566,132	38,808	116,157	912,390

* Twentieth Air Force casualties previously included in India-Burma theater, now included in Pacific Ocean areas.—San Francisco *Call-Bulletin*, August 11.

Plastic Artificial Eyes

Thirty installations, twenty-nine general hospitals and one regional hospital have been designated plastic eye centers for the Army Medical Department.

As of June 30, 1945, approximately 5,100 plastic artificial eyes have been made and fitted. In addition, the plastic eye laboratories have made conformers, eye spheres and other appliances for the eye clinics.

Experimental work is still being carried on in the plastic artificial eye program. Technicians are continually endeavoring to improve and give these plastic eyes greater mobility and lessen abrasion.

Letter from Los Angeles Member on Okinawa Experience

(COPY)

August 4, 1945.

Editor George Kress, M.D., Addressed.

We just arrived in the States from New Guinea and Manila and received your letter with galley proofs, which I am returning. We will be here only about 1½ weeks—quick combat load and out for another invasion which I hope is "the Main Stuff."

... I had a hard workout at Okinawa—when final reports of fleet showed that our ship's hospital received one-fourth of all serious fresh casualties during first week of invasion embarked there. Our ship unloaded the famous 6th Marines "Raiders" from Guadalcanal—on Okinawa on Easter Sunday, April 1st—the first ships to hit the beach and then we stood in close only 300 yards off "Red Beach." Thus the reason for us receiving so many operative belly, brain and compounded bone cases. It was rather a workout for me since I was alone on board for the surgery, since I had all lieutenant "junior grade"—young doctors just out of naval internships, to help out. Temporary medical personnel ordered to our ship just for this invasion were also junior grade lieutenants just out of internship, but fine, coöperative and hard-working doctors. After operating continuously all night and under air attack, at 4:30 A.M., I was "completely shot" so simply had to get 2 hours rest before operating a belly case of a Marine Captain, sent to us in desperate shock—shot twice through pelvis—belly and with complicating picture of compression, comminuted fractures of low spine with one bullet still in spine, and complete paralysis of both feet. He had previously been found lying in a stream of water for 7 hours, on Okinawa. After hours of transfusion—adrenalin—caffeine (blood count 2 million reds) his condition improved, so I felt safe to open belly. By grace of God he lived, and later we were able to reduce his fractured spine in a dorsal extension sling—body plaster cast—and got him off our ship a week later in cast. Found out that he arrived in States O.K., via air transport plane. For my brain operation (compound skull with avulsed dural membranes and brain tissue with depressed bone fragments) I was wishing for Carl Rand or Raney, but realized I was not at County or Good Samaritan Hospitals in Los Angeles, so just had to go to it anyway. My scientific paper on these cases is back in Washington now—along with bullets and Jap. shrapnel.

Best wishes,

(Signed) OFFICER IN U.S.N.R.

Pacific Medical Conference

One of the most important medical meetings of this war was held in the Office of The Surgeon General, Washington, D. C., on July 30, 31, and August 1, and was attended by outstanding experts in surgery, medicine and disease control from all theaters of operation throughout the world.

Major General Norman T. Kirk, The Surgeon General, called the meeting "to pool the knowledge and experience of the men from the fighting fronts in order that the lessons learned thus far in the war can be more

thoroughly applied than ever before in the conservation of human life."

In addition to about forty of the country's leading medical experts from the overseas theaters, General Kirk had officers from virtually every division and branch of the Office of The Surgeon General attend the meetings and thoroughly discuss all phases of medical and surgical care, supply, transportation, training, and related subjects.

Such problems as the redeployment of millions of men to the Pacific areas were discussed. It was pointed out that the transfer of such vast numbers of American troops will invariably present health problems, but does not make the job impossible or unnecessarily difficult because of the experience of three and one-half years of facing and successfully fighting and controlling disease hazards of these areas.

More effective means for the treatment and care of both wounded and sick troops near the front was another principal question studied at the meeting. It has been proven in the campaigns to date that such care has paid great dividends in the saving of lives and the alleviation of suffering, and the methods used are to be extended as far forward and as rapidly as is humanly possible.

Prevention and treatment of tropical disease were among the major problems studied and discussed at the meeting. Medical Corps specialists declared, however, that because many of these diseases are unknown in the United States a dread of them has been created out of all proportion to their actual harmfulness.

The problem of returning medical personnel who have served several years in Pacific areas to the United States and replacing them with personnel from this country and the European and Mediterranean Theaters was given special study.

"Many of these men have well earned their relief from duty there and many are eligible for discharge," General Kirk said. "As rapidly as replacements can be sent, these men will be returned to the United States."

He added, "From the lessons learned thus far we believe that front line medical care and the prevention and cure of disease can be perfected and the men meeting here know best how it can be done. Insofar as is humanly possible no mistake made before will be repeated."

COMMITTEE ON PUBLIC POLICY AND LEGISLATION

1945 California State Legislation

Commenting under this caption, the August magazine of the California State Chamber of Commerce prints the following item:

HEALTH INSURANCE

Nineteen different bills were introduced proposing various forms of prepaid medical care, compulsory health insurance, etc. Although major bills were closely contested on a number of roll calls, not a single one of these measures was passed by the Legislature. Both the Senate and Assembly created special interim committees, with a total of \$70,000 for expenses, to study further these questions of prepaid medical and hospital care, health care, etc.

Survey is Made of Interim Committees of California Legislature

The selection of members to serve on interim committees of the two Houses of the California Legislature, which will make independent studies of State health insurance programs has aroused considerable speculation as to the political philosophies that will be represented

by those chosen to the groups. On the basis of past records it is generally felt that the Assembly committee is definitely loaded with opponents of the philosophy of State health insurance. The Senate group, on the other hand, is regarded as being closely divided, and possibly somewhat favorable to such plans.

Chairman of the Senate interim committee on health insurance is Senator Byrl Salisman of Palo Alto. Senator Salisman was the author of the health insurance bill sponsored by Governor Earl Warren, which was presented to the Upper Chamber at the 1945 legislative session. Despite this fact, however, he is regarded as being the least certain member of the group.

Also on the Senate committee are Senator John F. Shelley, of San Francisco, who was the author of a modified Rhode Island health insurance bill presented at the 1945 session, and who is definitely counted among the proponents of the State health insurance philosophy, and Senator Chris. N. Jespersen, of Atascadero, who supported State health insurance legislation during the past session.

The members who are counted on to oppose public health insurance legislation before the Senate committee are Senator L. G. Sutton, of Maxwell, who represents a farming area and who opposed such bills in 1945, and Senator Arthur H. Breed, Jr., of Oakland.

It is generally considered that the committee is about evenly divided in its composition and that Senator Salisman will be the member to hold the balance of power.

On the Assembly committee the balance against the State health insurance philosophy appears to be decisive. Chairman of the committee is Assemblyman Ernest R. Geddes, of Pomona, a freshman legislator who consistently voted against State health insurance measures at the 1945 session. Other certain opponents of such legislation are generally believed to include Fred H. Kraft, of San Diego, who was chairman of the public health committee during the 1945 session and who opposed all health insurance bills; Sam L. Collins, of Fullerton and John W. Evans, of Los Angeles, both of whom opposed all State health measures.

The remaining three members are regarded as being more doubtful in their position, as a result of a study of their votes in the 1945 session. Assemblyman J. G. Crichton, for example, voted against both the compulsory health bills of Governor Warren and of the C.I.O., but supported A.B. 2201, the hospitalization bill. Assemblyman Ernest R. Debs, of Los Angeles, was among those who voted favorably on the compulsory health bill of the C.I.O. The remaining member, Assemblyman Vincent Thomas, of San Pedro, voted for both the C.I.O. bill and the hospitalization bill.

All observers agree that the past votes of the committee members are not infallible standards by which to measure their attitudes, and that both committees are evenly divided so that anything could happen. . . —San Francisco *Underwriter's Report*, August 2.

Medical Service, Insurance Free to School Pupils

The cost of securing medical or hospital services, or accident or liability insurance for the protection of school children while in school buildings or other school premises, is to be borne by the school district and neither the pupils nor the parents can be assessed for such costs, Attorney General Robert W. Kenny, head of the State Department of Justice ruled in an opinion.

His decision was directed to Thomas Whelan, district attorney of San Diego county, who requested Kenny's opinion on the constitutionality of a recent amendment to the Education Code.

"Such medical and hospital services and accident insurance," Kenny stated; "are afforded school districts

employing less than five physicians as full-time supervisors of health."

He pointed out that the education code provides for similar coverage for pupils of school districts injured while participating in athletic activities which are under the supervision of school district authorities. This cost, he said, is authorized to be paid from the school district funds.—Broderick *Independent*, July 12.

Time to Act!

There have been countless schemes proposed to provide nationwide medical and hospital services on a scale never before dreamed of. Granting that the motives behind all such efforts are sincere, the fact remains that neither money nor laws alone can buy health. American doctors have been giving our nation improved medical practices at a rate not equaled elsewhere in the world. But they now face conditions beyond their control.

The March 10 issue of the *Journal of the American Medical Association* points out that "the Council on Medical Education and Hospitals has repeatedly urged the necessity for changes in the present policies of governmental agencies, including the Selective Service System, having to do with the education of pre-medical students." It shows how the regulations now in force threaten the supply of doctors.

Official notice of this threat is now taken by Senator Allen J. Ellender of Louisiana, who has introduced Senate Bill 637 which includes provisions for deferment of an adequate number of pre-medical students, and for the deferment of such numbers of medical students as will be sufficient to supplement civilian sources of students to assure full classes.

It is evident that unless something like this is done, not only the Army and the Navy, but our civilian population will face a dangerous shortage in medical men. The profession is now being depleted by about 4,000 deaths and an unknown number of retirements annually.

Competent doctors cannot be created in a day, and we will be showing poor gratitude to returned veterans who are injured, if they find a scarcity of competent doctors to meet their needs, not to mention the importance of such doctors for our civilian population.—San Francisco *Western Underwriter*, June.

Compulsion Is Not Freedom—Re: Compulsory Health Insurance

In the bill before Congress to broaden the Social Security Act to give everyone protection against "the slings and arrows of outrageous fortune" from childbirth to the grave, the word "compulsory" is shunned like the odiferous aroma of the lowly skunk. Nowhere is that word used in any discussions by the promoters of the bill. The public is actually made to believe that everyone will have complete freedom in choice of a doctor, and that doctors will have complete freedom in choice of patients.

It is claimed that State medicine is not socialized medicine. This is about as logical as to say the bill is not compulsory, when the wording of the bill forces all employees drawing up to \$3,600 a year to pay 4 per cent of their earnings into the Social Security fund, and all employers to pay a like amount.

When Government goes into business, that is Socialism, so when the Federal Government establishes a system of insurance to which everyone must contribute, when it regulates the provisions of medical service through Washington headquarters, when it regulates fees that doctors are to receive when they participate in the system, when it regulates those who are to be consultants

and when consultants are to be consulted, that is definitely socialized medicine. The doctors who are dissatisfied with the system can quit and turn their abilities to some other channel, but the people, once they are saddled with compulsory medical practices, are the losers, and they will definitely have to pay for socialized medicine even though they prefer a private doctor.—Editorial in *Palo Alto Citizen*, July 27.

Law Makers Listen to Voice of Farm Bureau

Under the above caption, Modesto *Tribune* of August 10, gave the following:

The power and influence of the Farm Bureau, particularly in the legislative field, is indicated in the fact that 20 of the 27 issues presented to the Legislature this past session have been written into the laws of the State.

Milton L. Kidd, President of the Stanislaus County Farm Bureau, pointed this out at a recent Farm Bureau meeting, following a report made by Dr. Von T. Ellsworth, research director and legislative representative for the California Farm Bureau Federation. According to Dr. Ellsworth, two of the measures specifically sponsored by the Federation failed of signature by Gov. Earl Warren, and five were defeated in the Legislature.

This Farm Bureau legislative victory is only a part of the story, Dr. Ellsworth said, for it does not include the hundreds of measures supported, amended or opposed by Farm Bureau.

Farm Bureau measures which lost out included those pertaining to: Voluntary Health Insurance; Use of County Hospitals; Repeal of Daylight Saving; Farm Representation on Fair Boards; An Insectary at the Riverside Experiment Station; Fictitious Mortgages.

Recent Legislation Involving California State Department of Public Health

Attached is list of bills favorably acted upon by the Governor which are of special interest to the State Department of Public Health.

These bills become effective September 15, 1945.

Assembly Bills Approved 1945 Session

Bill Number	Chapter Number	
A.B. 112	1373	Clinical laboratories, lawful to accept test assignments from person licensed in any healing art.
A.B. 226	1027	Structural pest control, regulation of.
A.B. 237	601	State tuberculosis subsidies where patients are placed outside county hospital.
A.B. 239	271	Assessment proceedings for sanitary sewers.
A.B. 274	710	Child care centers.
A.B. 302	979	Penalties for violations of Chap. 6, H & S Code, and permitting charges by cities or counties for use of sanitation and sewerage systems.
A.B. 321	602	Provisions of marriage licenses to be filed with County Clerk in County where license was issued five days after ceremony.
A.B. 361	131	Relating to institutions providing housing for aged persons. Nothing to prohibit adoption of rules by local authorities governing sanitation, health and hygiene.
A.B. 362	132	Relating to institutions for child care. Nothing to prohibit adoption of rules by local authorities governing sanitation, health and hygiene.
A.B. 527	957	Relative to annexation of property for pest abatement districts.
A.B. 543	722	Health service for public school pupils. Includes pupils in high schools.
A.B. 580	578	County Health officer to advise on medical matters relative county pension or retirement system.
A.B. 601	1418	State Department of Public Health to

- license hospitals and adopt regulations governing same.
- A.B. 677 1237 State Department of Public Health to make necessary rules governing sanitation of bakeries; providing penalty for violation. Employees or other persons affected with diseases enumerated are prohibited from working in such bakeries or delivering products therefrom. Water for mixing dough in bakery products if taken from well shall be certified to by State Department of Public Health or city or county health department.
- A.B. 815 1243 Designation of costs for educating physically handicapped children.
- A.B. 964 1477 Appropriates \$280,000 to State Department of Education for operation of the State cerebral palsy schools—one in Northern California and one in Southern California in connection with cerebral palsy diagnostic and treatment center to be operated in Northern California by the Regents of the University of California, and in Southern California by the governing board of a public or private medical school of a university with which the State Department of Education contracts for such service.
- A.B. 965 1516 Appropriates \$154,000 to State Department of Education contracting with the Regents of the University of California in Northern California and with the medical school of any public or private university or hospital in Southern California to operate and maintain cerebral palsy diagnostic and treatment center in connection with two State cerebral palsy schools—one in Northern California, one in Southern California.
- A.B. 1218 743 State Board of Public Health to register school audiometrists.
- A.B. 1219 814 Adds school audiometrists and chiropodists to list of persons permitted to supervise the health and physical development of pupils in the public schools.
- A.B. 1310 1337 Repeals Sections 5461 and 5464 of the H & S Code affecting certain of the mechanics of the operation of sanitation districts.
- A.B. 1427 1196 Amends H & S Code, Drug Act; authorizes inspectors, State Bureau of Food and Drug Enforcement to assist in enforcement.
- A.B. 1523 1433 Appropriates \$200,000 for State Department of Public Health for purchase of real property in the San Francisco Bay area for the Department of Public Health postwar building program.
- A.B. 1812 1508 Creates a Board of Social Work Examiners of the State of California under the Department of Professional and Vocational Standards. Provides for registration and use of letters, "R.S.W."
- A.B. 2191 1332 Education of minors in tuberculosis wards, hospitals or sanatoriums.
- * * *
- Senate Bills Approved 1945 Session**
- | Bill Number | Chapter Number | Description |
|-------------|----------------|--|
| S.B. 25 | 1447 | Increases subsidy from \$3.00 to \$7.00 for persons suffering from tuberculosis. |
| S.B. 161 | 404 | Amends H & S Code relative to auto and trailer camps in counties having a population less than 900,000. |
| S.B. 248 | 661 | An act to amend Sections 10615 and 10617 of the H & S Code, relating to registration of previously unregistered births. |
| S.B. 308 | 221 | Provides that health officer shall quarantine or isolate each case of tuberculosis. |
| S.B. 319 | 856 | Provides for registration and examination of sanitarians employed in full-time State and local departments of health. |
| S.B. 376 | 663 | To establish record of birth, death or marriage. Provides copy be sent by State registrar to the local registrar. |
| S.B. 432 | 1003 | Amends an act entitled, "An act to provide for the creation, organization and government of water conservation districts." |
| S.B. 433 | 1004 | Amends an act entitled, "An act to provide for the creation, organization and government of water conservation districts." |
| S.B. 478 | 1005 | State Director of Public Health shall be State Registrar of Vital Statistics, and provides that certified copies of birth and death certificates may be issued in short form. |
| S.B. 521 | 1099 | Relative to sites for garbage or rubbish or other disposal plants. |
| S.B. 577 | 1208 | Amends Food Act, technical changes. |
| S.B. 579 | 1057 | Provides that burial permits or removal permits from local registrar outside the State must accompany bodies brought into California for burial. |
| S.B. 581 | 1209 | Amends Cannery Act; exempts operation of non-commercial canning centers. |
| S.B. 582 | 971 | State Department of Public Health may maintain a mental health service. |
| S.B. 586 | 932 | "The Local Hospital District Law" provides for organization, incorporation and management thereof. |
| S.B. 636 | 409 | Organization of mosquito abatement districts by Boards of Supervisors. |
| S.B. 651 | 1060 | Exempts laboratories licensed by U. S. Public Health Service or licensed by Bureau of Animal Industry of U. S. Department of Agriculture from the provisions of the H & S Code relating to biologics. |
| S.B. 705 | 705 | State Board of Public Health and State Department of Public Health included in agencies where administrative procedure is to follow Government Code. |
| S.B. 729 | 891 | Administrative procedure in suspending or rejecting cannery licenses, clinic and dispensary licenses. |
| S.B. 730 | 892 | Hearings on violation of the Non-Profit Hospital Service Act to be in accordance with Government Code. |
| S.B. 811 | 1389 | Amends California Resort District Act to have powers of sanitary district in unincorporated areas. |
| S.B. 812 | 1390 | Includes "resort districts" in definition of cities under Section 5005 of the Streets and Highways Code. |
| S.B. 813 | 1391 | Includes "resort districts" in definition of streets under Section 5014 of the Streets and Highways Code. |
| S.B. 830 | 975 | Provides for information on birth certificates when time and place of birth are unknown. |
| S.B. 935 | 1015 | Covers the cleaning of septic tanks, cesspools, seepage pits. Registration of operator. Health officer to act on application within thirty days of filing. |
| S.B. 1014 | 1367 | Amends "Crippled Children's Act" relative "residence." |
| S.B. 1015 | 1368 | Amends "Crippled Children's Act" providing that Boards of Supervisors shall appropriate not less than one mill on each dollar of taxable property for the care of handicapped children. |
| S.B. 1020 | 1519 | Appropriates \$400,000 to State Board of Education for purchase of sites, construction of building, etc., for two cerebral palsy schools—one in Northern and one in Southern California. |
| S.B. 1021 | 1520 | Appropriates \$80,000 to State Department of Public Health for physically handicapped children suffering from cerebral palsy. |
| S.B. 1022 | 1521 | Appropriates \$40,000 to State Department of Education for coordination of education of physically handicapped minors in public schools and in cerebral palsy schools. |
| S.B. 1283 | 1351 | Sanitation districts formed under Section 4704, H & S Code, not subject to the "District Investigation Act of 1933." This section effective until the 91st day after final adjournment of the 1947 Legislative session. |
| S.B. 1302 | 1024 | Creates the California State Disaster Council. |
| S.C.R. 57 | 120 | Provides that the State Department of Public Health shall investigate the problem of provision of human blood and derivatives of human blood to the people of the State and that the State Department of Public Health report the results of its investigation with recommendations to the 1947 Legislature. |

COMMITTEE ON POSTGRADUATE ACTIVITIES†

The Research Study Club of Los Angeles

Fifteenth Annual Mid-Winter Postgraduate Clinical Assembly in Ophthalmology and Otolaryngology
January 21 to February 1, 1946

* * *

Special Courses in "Applied Anatomy and Cadaver Surgery of the Head and Neck"
February 1, 2, 3, 4 and 5

* * *

The American Board of Ophthalmology will conduct an examination in Los Angeles, January 16, 17, 18 and 19, 1946, immediately before our Mid-Winter Clinical Convention. (Those who wish to take this examination should apply promptly to the "American Board of Ophthalmology, Cape Cottage, Maine.")

The guest speakers for the 1946 Convention will include: For the *Eye*—Dr. Alan C. Woods and Dr. Jack S. Guyton, of Johns Hopkins Medical School, Baltimore, Maryland; Dr. Meyer Wiener, of Coronado, California; Frederick C. Cordes, of San Francisco, California, and Irving B. Lueck, B.S., of Rochester, N. Y. For the *Eye, Ear, Nose and Throat*—Dr. Herbert M. Evans, Berkeley, California, and Dr. William J. Kerr, of San Francisco, California. For the *Ear, Nose and Throat*—Dr. O. E. Van Alyea, of Chicago, Illinois; Dr. Richard Waldapfel, of Grand Junction, Colorado; Dr. Samuel Salinger, Chicago, Illinois; Dr. Samuel Fomon, of New York City, New York; Dr. Charles E. Kinney, Cleveland, Ohio, and Dr. Vern O. Knudsen, University of California, Los Angeles. . . .

States the Program Committee:

At our Convention in January, 1945, the large attendance caused some anxiety. In the Didactic Course an unlimited number can be accommodated; but it is clear that we must make some elaborate preparations for the Instruction Courses. From 31 states and Canada over 350 attended, and about 100 more would have been with us if it had not been for inability to secure either transportation from many parts of the country, or hotel accommodations in Los Angeles. Many have already arranged for their accommodations next year. Nearly one million extra people are in Los Angeles due to the war. It would be wise for those who plan to attend to make arrangements for accommodations *as soon as possible*. Should you prefer some hotel or apartment in Los Angeles, please write direct for reservations. Retain the reply from the hotel, in order that you may demand your rooms upon arrival here. If you have no choice of hotel, write to Mr. H. M. Nickerson, Manager, Elks Club, Douglas MacArthur Park, Los Angeles 5, and he will secure suitable reservations for you. Kindly advise Mr. Nickerson the approximate price you wish to pay for your rooms, thus enabling him to secure what you desire. . . .

In accord with requests from a majority of the members, the first week will be devoted to the *Eye*—from Sunday to Sunday. The *Ear, Nose and Throat* week will be from Friday to Friday—January 25 to February 1. Those of us who confine our work to only one of the specialties may complete either subject in one week. The *Ear, Nose and Throat* luncheon, on Friday, January 25,

is to be followed by an afternoon of didactic lectures and instruction courses. Saturday morning all subjects are to be of equal interest to both groups. It is probable that the Triologic Society, Western Section, will have its meetings on Saturday afternoon and Sunday morning. All members of the class are invited each year to the Triologic meetings. In brief, it is important for all members of the *Ear, Nose and Throat* group to be here on Friday morning, January 25.

The Round Table Luncheons, as in the past, will be the heart of the Convention. In general, the topics will be discussed along the line of the preceding lectures; in addition, all members of the Convention are urged to enter into an informal discussion on any live topics which deeply concern them. The members are also requested to turn in, in writing, subjects that they wish discussed, and the Committee will then select someone well fitted to open the discussion. (Lecturers should not be asked to discuss such questions with the individual. *Take them to the Round Table Luncheon so that all may benefit!*)

The *Special Course* in "Applied Anatomy and Cadaver Surgery of the Head and Neck" will be given directly after the Clinical Convention. Dr. Simon Jesberg, whose gifts as a teacher and clinician we already know, will conduct this Course in association with Dr. Samuel A. Crooks, Professor of Anatomy at Loma Linda College of Medical Evangelists. Dr. Crooks will demonstrate all anatomic relations in the different fields of head and neck surgery. As before, this course promises to be one of special practical value. The Cadaver Course will begin at the conclusion of the Clinical Course on February 1, 1946, and will continue into the following week—thus avoiding any conflict with the didactic lectures and the regular work of the Clinical Convention. Twenty cadavers are available. This Course is restricted to 40 members—two to each table. The fee is \$50.00. Naturally, the members will be enrolled in the order of registration. In the future, it may be possible to have a larger group, but it is probable that at present only 40 members can be included in the Cadaver Course.

The fee for the Clinical Convention is \$50.00; those in the Military Service are our guests. The fee for the Cadaver Course is \$50.00; those in the Service may enroll for one-half of the regular fee—namely, \$25.00.

Wartime Graduate Medical Meetings

Note.—The C.M.A. Postgraduate Committee presents below the roster of speakers and topics of "Wartime Graduate Medical Meetings." These listings may have suggestive value to program committees of Component County Societies.

CLINICS, DEMONSTRATIONS, LECTURES

Under the Auspices of the American Medical Association, the American College of Physicians, the American College of Surgeons
Authorized by the Surgeons General,
Norman T. Kirk, Ross T. McIntire, Thomas Parran

Committee 24th Zone

Lt. Comdr. Geo. C. Griffith (MC), USNR, Chairman
U. S. Naval Hospital, Corona
Capt. Harry P. Schenck (MC), USNR
Wayland A. Morrison, M.D.
James F. Churchill, M.D.

Program of the Wartime Graduate Medical meetings for Zone 24 (Southern California) follow:

Birmingham General Hospital, Van Nuys

Sept. 12—3:00 P.M.—"The Effects of High Altitude and Gravity," by Prof. D. R. Drury, University of Southern California.

Sept. 26—3:00 P.M.—"Cardiovascular Problems," by Dr. W. Gordon Garnett.

† Requests concerning clinical conferences, guest speakers, and other information, should be sent to the California Medical Association headquarters office, 450 Sutter, San Francisco, in care of the Association Secretary, who is secretary ex officio of the Committee on Postgraduate Activities.

Camp Cooke Station Hospital, Lompoc

Sept. 5—1:00 P.M.—“Respiratory Disease Problems,” by Major F. E. Willett, M.C., AAF, USA.

Sept. 19—1:00 P.M.—“War Wounds of the Chest,” by Lt. Comdr. J. P. O'Connor, MC, USNR, and Lt. Henry Jaffee, MC, USNR.

Camp Haan, A.S.F. Regional Hospital

Sept. 4—3:30 P.M.—“The Pneumonias,” by Dr. W. E. MacPherson, President, College of Medical Evangelists.

Sept. 18—3:30 P.M.—“The Use of Fibrin and Fibrinolysin in Wound Healing,” by Capt. Harry P. Schenck, MC, USNR. (Joint meeting with March Field AAF Station Hospital, to be held at March Field, Riverside, California.

Hoff General Hospital, Santa Barbara

Sept. 5—8:00 P.M.—“Respiratory Disease Problems,” by Major P. E. Willett, M.C., AAF, USA.

Sept. 19—8:00 P.M.—“War Wounds of the Chest,” by Lt. Comdr. J. P. O'Connor, MC, USNR, and Lt. Henry Jaffee, MC, USNR.

March Field, AAF Regional Station Hospital, Riverside

Sept. 18—3:30 P.M.—“The Use of Fibrin and Fibrinolysin in Wound Healing,” by Capt. Harry R. Schenck, MC, USNR. (Joint meeting with Camp Haan ASF Regional Hospital, to be held at March Field.

Santa Ana Army Air Base Regional and Convalescent Hospital

Sept. 4—3:30 P.M.—“Acoustic Trauma,” by Comdr. D. C. Mitchell.

Sept. 18—3:30 P.M.—“Rheumatic Heart Disease,” by Dr. Louis E. Martin.

Torney General Hospital, Palm Springs

Sept. 4—3:30 P.M.—“Surgery of the Biliary Tract,” by Capt. Howard K. Gray, MC, Chief of Surgery, USA Naval Hospital, San Diego.

Sept. 18—3:30 P.M.—“The Management of the Simple Skin Diseases,” by Lt. Col. Everett R. Seale, M.C., Chief of Dermatology, Santa Ana Army Air Base.

U.S. Naval Hospital, Santa Margarita Ranch, Oceanside

Sept. 13—1:00 P.M.—“Cardiac Pain,” by Lt. Comdr. Robert L. Langley, MC, USNR.

Sept. 27—1:00 P.M.—“Differentiation Between the Protozoal and Bacillary Dysenteries,” by Dr. John F. Kessel, Prof. of Bacteriology, University of Southern California.

U.S. Naval Air Training Station, San Diego

Sept. 7—3:00 P.M.—“Problems in Tuberculosis,” by Comdr. W. L. Rogers, MC, USNR.

Sept. 21—3:00 P.M.—“The Malingering Tests,” by Dr. John Mackenzie Brown and Mr. Raymond Brown.

U. S. Naval Hospital, Long Beach

Sept. 19—3:00 P.M.—“Problems in Tuberculosis,” by Comdr. W. L. Rogers, MC, USNR, Chief of Surgery, U. S. Naval Hospital, Corona.

U. S. Naval Hospital, Corona

Sept. 13—1:00 P.M.—“Allergy,” by Dr. John Lamson.

Sept. 27—1:00 P.M.—“The Rh Factor,” by Capt. George Macer, M.C., USA.

U. S. Naval Hospital, San Diego

Sept. 9—1:00 P.M.—“Clinical Aspects of Rheumatic Fever,” by Lieut. Comdr. George C. Griffith, MC, USNR.

One day we will cast out the passion for Europe, by the passion for America.

—Emerson, *Conduct of Life: Considerations by the Way.*

COMMITTEE ON ORGANIZATION AND MEMBERSHIP

San Francisco County Medical Society Announces Appointment of an Executive Secretary— Frank J. Kihm

In the *Bulletin* of the San Francisco County Medical Society appeared the following:

“We are pleased to announce the appointment of Mr. Frank J. Kihm as executive secretary of the San Francisco County Medical Society. A long-felt want has grown into a critical need as the activities of the Society have increased and broadened its scope. In the crises now facing us and threatening the entire status of the practice of medicine, the consideration of public relations is vital and alone is sufficient to occupy the full time of a trained man. Even the routine management of the Society and its business at present exact more time and energy than practicing doctors can give. The full-time services of a man trained in organization and public relations can broaden the influence of our Medical Society and strengthen the position of the medical profession.

“Some months ago your Board of Directors approved the appointment of a full-time executive secretary, provided a suitable candidate for such a position could be found. Frank J. Kihm comes to us recommended and endorsed by John Hunton, executive secretary of the California Medical Association. He is a native American of American parentage and has been employed in San Francisco since 1922. Since August 1938, Mr. Kihm has been the city editor of the *Wall Street Journal*, Pacific Coast edition. Previous to this he has held executive positions in the business world involving advertising, writing and placing news releases, publicity, radio, magazine and newspaper work. November 6, 1942, he entered the United States Marine Corps as first lieutenant and on May 10, 1943, was promoted to a captaincy. His work in this branch of the armed forces was classification and assignment of enlisted personnel and classification of officers. He was released from active duty September 1, 1944, following satisfactory completion of his assignments and resumed his position as city editor of the *Wall Street Journal*.

“Mr. Kihm will assume his duties about September 15. We shall welcome the addition of his abilities to the working staff of the Society.”

COMMITTEE ON HOSPITALS, DISPENSARIES AND CLINICS

Hospitalization Growth

A recent communication from the Hospital Service Plan Commission of the American Hospital Association, gives interesting information concerning hospitalization plans and statistics:

Records continue to be broken in the number of Americans joining voluntary non-profit plans for prepaying hospital bills. A total of 2,282,482 new members joined during the first six months' period of 1945 and thus exceeded by more than 500,000 the previous record membership growth established during the corresponding period of 1944.

This announcement was made recently by Dr. C. Rufus Rorem, director of the American Hospital Association's hospital service plan commission, who stated that the total Blue Cross membership in 43 states, the District of

Columbia, 7 Canadian provinces, and Puerto Rico now numbers 18,800,000 Americans.

Whereas a year ago, new members were enrolling nationally at the rate of approximately 12,000 per working day, the rate has now increased to almost 17,000 persons daily. More workers and family dependents joined Blue Cross during the first six months of 1945 than joined during the entire year of 1942.

Six states have passed the million membership mark. New York State leads with over 3,000,000 Blue Cross members; Ohio, 2,160,000; Pennsylvania, 1,933,000; Michigan, 1,303,000; Illinois, 1,222,000; and Massachusetts, 1,202,000.

A State-wide Blue Cross plan has just been approved for New Mexico which leaves only Arkansas, Mississippi, South Carolina, Idaho, and Wyoming without a community and hospital-sponsored plan for removing the financial worry of hospitalized illness or injury.

Doctor bill prepayment plans sponsored by state and county medical societies and made available to the public through coordination with Blue Cross hospital service plans increased in number from 19 to 24 during the first six months of 1945.

Problems of Enrollment.—Private insurance is usually sold by agents who canvass in the office, the factory, and the home. Experience shows that it does not sell itself. Consequently, commissions are offered to encourage the sale of insurance. But commissions are illegal for non-profit hospital and medical insurance in many states. Blue Cross protection is usually offered through salaried employees.

Enrollment expenses rarely exceed 3 per cent anywhere, and in some cases scarcely exist.

Group Coverage Easiest.—Most of the people in a community can usually be reached as groups of employees, which make up 95 per cent of the business of hospital service plans. Not only is it easier to get a large number of subscribers by the group method, but it has been found that plans are more apt to get the "average subscriber" by accepting many persons in a common office or employment at a time. The acceptance of a group protects the plan against "adverse selection," or too many poor risks. Group enrollment cuts down clerical work and bookkeeping expense, thus permitting a greater return in benefits for the subscriber's dollar. Most plans now accept groups as small as five—and even smaller units in rural districts. Group enrollment with payroll deduction is obviously the easiest and cheapest method of building membership. Where the employer will not provide collection facilities, it is often necessary to appoint one of the employees to make collections and look after the interests of the group. There are at least 100,000 of these group representatives, most of whom serve without pay. But if Blue Cross is to provide adequate security for the public, it must go beyond employed groups.

Individual Membership.—The Hospital Service Plan Commission has recommended broadening the base of Blue Cross membership. The Commission also urges plans to accept individuals who are self-employed or who for one reason or another cannot join a group. Some thirty plans have experimented with this type of subscriber, but as yet there is little individual enrollment anywhere except in some rural areas and in New York City, where there are over 75,000 non-group individual and family subscribers.

In New York, the experience in recent years with persons who cannot join through employed groups has been good. The practice has been to accept people on the basis of a medical questionnaire similar to that used by life insurance companies. Maternity benefits are usually given

only to group subscribers. Some of the plans will accept people without medical questionnaire during certain fixed periods, on the theory that most of the people who join during such a period will be in normal health. New York City, for example, is experimenting with a simple form of enrollment without medical questionnaire, during a limited period.

Community Enrollment.—One way of getting broader group coverage that has worked out particularly well is "community enrollment." A campaign is made to secure as members at least half the population of a village or town. This type of membership is not considered broad enough to be wholly desirable unless approximately 50 per cent join. In order to get such a large proportion, the aid of the mayor and local officials, local banks, the Grange, civic and health organizations women's clubs, and other associations is enlisted. Although insurance experts say that the best cross-section is obtained from employee groups, nevertheless, lodges, churches, societies of professional people, all of the doctors or dentists in a locality, all of the people residing upon a given street, or working in a large office building, may also be considered as a satisfactory group. Out of the many experiments now under way, the answer will be found as to the means of enrolling with a minimum of red tape, the self-employed, members of small establishments, farmers, domestics, and others, many of whom are not now covered by Blue Cross or even by the old-age and survivors' insurance.

Reaching the Farmer.—It has always been hard for farmers to get satisfactory medical or hospital care. There are not nearly enough hospitals in rural areas and farmers are independent and tend to avoid hospitals—especially when there are none nearby. Farms are widely scattered and the cost of collection and administration is therefore high. Living conditions on many farms are poor, and illness is more prevalent than in villages or cities. Yet farmers who lack money should be cared for just as well as the poor in cities.

Blue Cross is now making a serious effort to help country people get the hospital care they need. This is accomplished through cooperation with the Grange, the farm bureau, the union, the cooperative, the local bank, local mutual fire insurance companies, newspapers, creameries, and other marketing associations. More than twenty Blue Cross Plans are now actively trying to enroll families who live on farms and in villages. Even the poorer farmer is included. Hospital care has been made possible for many of those whom the Farm Security Administration aids in the purchase of the farm or equipment. The F.S.A. has helped by enrolling the farmers, collecting the money, and turning it over to Blue Cross. This has made it easy for the individual farmer and for the Plan. The Farm Security Administration also attempts to provide medical care for its families through medical societies and medical plans. Altogether, Blue Cross farm enrollment approximates 500,000, and in addition, over 500,000 members of needy farm families are provided with medical care through the Farm Security Administration, Blue Cross, and medical prepayment plans.

The Doctors' Plan of Medical and Hospital Care

Through the American Medical Association the physicians of the United States have offered a plan for voluntary "health insurance" which is quite comprehensive in scope and generally practical in its provisions. (Ed. Note. —See CALIFORNIA AND WESTERN MEDICINE for August, on pages 61-62, for A.M.A. and C.M.A. Principles.) The plan emphasizes local control and would limit the beneficiaries to those who helped pay the costs. In general it provides for medical care and hospitalization in

much the same manner used by private insurance companies and includes local care for indigents. Although suggesting Federal aid in some states if necessary, local administration and control would prevail.

The recent agitation about "health insurance" stems largely from a popular belief that medical and hospital costs are excessive and in many cases beyond the average pocketbook. Whether this belief is justified or not must be a matter of opinion. It is fitting, from this standpoint, that the medical profession should present some rational alternative to the various plans offered for compulsory insurance paid for by payroll taxes on employees and employers. Compulsory insurance, under either state or Federal auspices, not only would bring about regimentation of the people, but eventual regimentation and perhaps complete socialization of medicine. It is the part of wisdom for the country's physicians to meet the issue presented by some workable plan involving the minimum cost.

Most thoughtful and self-reliant citizens will prefer voluntary methods of providing for medical and hospital care, not only on the ground of individual freedom, but on the ground of equity. It is not consonant with justice for one group of citizens to be taxed for the special advantage of another group. Neither is state or Federal control desirable from a cost standpoint, as it is practically certain that such schemes as those already offered for compulsory insurance would result in heavy deficits to be made up out of the public treasury, thus invoking double taxation.

Already in existence are numerous private insurance companies offering medical and hospital benefits on a premium basis comparable to that proposed to be paid in payroll taxes. If the medical profession can work out some plan comparable with the plans of these companies—with even lower premium charges and larger benefits—it will perform a sound public service and remove a threat of socialized medicine which hangs over its head.—Editorial in *San Diego Union*.

C.M.A. CANCER COMMISSION

National Cancer Institute Act

In C. & W. M. for July, 1945, on page 33 reference was made to the National Cancer Institute Act. Additional information concerning some of its activities is given below.

Traineeships in the Diagnosis and Treatment of Cancer

In recognition of the need for more physicians specially trained in the diagnosis and treatment of cancer, Congress included in the National Cancer Institute Act a provision authorizing the Surgeon General—

To provide the necessary facilities where training and instruction may be given in all technical matters relating to diagnosis and treatment of cancer to such persons as in the opinion of the Surgeon General shall have proper technical training and shall be designated by him for such training or instruction.

The address of the National Cancer Institute is Bethesda, Md.

Ways and means of carrying out this section of the act were also taken up at the first meeting of the National Advisory Cancer Council, and Dr. James Ewing was appointed chairman of a group to study the question and make recommendations.

Examination of Cancer Cures

The Institute receives numerous letters from people who have, or who know someone who has, what they consider a "cancer cure." Most of these cures are formulas for a

paste or a salve which can be used only for treatment of external cancer. These correspondents are told that formulas of this kind have been known to the medical profession for many years but that since the discovery of x-ray and radium they have had only a limited use, therefore there is nothing to be gained by testing other formulas of the same or similar composition.

As to the examination of other types of treatment a definite policy approved by the National Advisory Cancer Council has been adopted. This policy provides that the applicant must meet the following requirements:

(1) The method of treatment must be explained fully. There must be no secrecy whatsoever in regard to the composition or the nature of the treatment.

(2) Complete clinical records must be submitted of a suitable number of cancer patients treated with the remedy or method in question under competent medical supervision, and in each case the diagnosis of cancer must rest on competent and verifiable microscopic examination.

A.M.A. Council on Medical Service Appoints Advisory Committee to Coöperate with American Cancer Society

From the *Field Army News*, published by the American Cancer Society, July, 1945, the following excerpt should be of interest (for action taken by House of Delegates of California Medical Association at its annual session, held in Los Angeles, on May 6, 1945, see *CALIFORNIA AND WESTERN MEDICINE*, for June, 1945, on pages 324, 336 and 346):

The Council on Medical Service and Public Relations of the American Medical Association on May 11, 1945, took the following action as reported in the June 2 issue of the *Journal of the American Medical Association*:

American Cancer Society Clinics.—Mr. Louis Neff, Executive Director, American Cancer Society, discuss the program of the establishment of clinics by the society.

Dr. McCormick made the following motion after discussion: "The work of the American Cancer Society be supported by this Council with the understanding that all work done in the various counties be done under the supervision of the county medical society and that a committee be appointed by the chairman of this Council to act as an advisory committee of the Council coöperating with the American Cancer Society until such time as the committee on chronic diseases is appointed, when it might seem feasible for this committee to take over the work." The motion was seconded by Dr. McGoldrick.

At the same time, the Council appointed a committee "to act as an advisory committee of the Council coöperating with the American Cancer Society . . ." This committee consists of Dr. Thomas A. McGoldrick of Brooklyn, as chairman, Dr. Louis H. Bauer of Hempstead, New York, and Dr. Edward J. McCormick of Toledo, Ohio.

Policy

From the earliest beginnings of the American Cancer Society, it has held rigidly to the policy that all medical aspects of its program must be in the complete control of the medical profession. This policy was considered to be of utmost importance even when the activities of the Society were largely confined to educational efforts. It becomes of increased importance now that we are engaged in a program which includes a certain amount of service to the cancer patient.

The "Service" part of our program has developed from needs and conditions which have developed in the field, not from any organized effort on the part of the central headquarters. Transportation of patients to clinics, bandage or dressing projects, other forms of direct contact with the cancer patient, all have been the result of demonstrated local needs and have been organized and conducted under the supervision and direction of the local medical groups.

New Commander of California Division of the American Cancer Society

Mrs. Stanhope Nixon, on August 6, was appointed State Commander of the California Division of the American Cancer Society.

Mrs. Nixon's appointment by the California Medical Association to the high post in cancer control work was announced by Mrs. Harold Bogert, southwestern regional director of the national society, here at present from her home in Denver, Colo.

Long a leader in civic and social affairs in Santa Barbara, her former home, and in San Francisco, Mrs. Nixon, since the war, has devoted most of her time to the American Women's Voluntary Services, which she organized in California and of which she is State president.

As State Commander of the American Cancer Society, she succeeds Mrs. Henry J. Ullmann of Santa Barbara.

Marginalia

States the *Statistical Bulletin* of July, 1945:

Altogether, the recent trends in cancer mortality are encouraging, and there is reason to believe that real gains are being made. It is very likely that further progress will be achieved by advances in medical and surgical treatment and through discoveries in scientific research. But even in the present state of knowledge and medical practice, many thousands of lives could be saved annually by earlier diagnosis and treatment. Cancer control is a major challenge not only to the medical profession, but to the lay public as well.

THE AMERICAN CANCER SOCIETY
350 Fifth Avenue, New York 1, N. Y.

August 15, 1945.

Dear Dr. Kress:

Because of a number of administrative changes due to the enlargement of the American Cancer Society's program, I am writing a rather belated letter on behalf of the directors of the American Cancer Society to express their appreciation for your help in contributing space during our campaign, through Mrs. Francis J. Rigney.

The contribution of space, amounting to many thousands of dollars, carrying the message "Guard those you love—Give to conquer cancer" aided us greatly and your continued help during these trying times, gives us all courage and inspiration.

Therefore, please accept our grateful thanks for all you have done for us in the past, and, we hope will continue to do in the future.

Sincerely yours,

AMERICAN CANCER SOCIETY.

COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

Better Health for the American People

Because undue concentration of authority limits freedom, restricts progress, and may lead to social injustice, proposals for government to become the dominant power in the American system of health care constitute a serious threat to the health welfare of the American people, the Michigan Health Council asserts in a newly published booklet of 12 pages.

The Michigan Council's statement points out that "democracy by its very nature forbids undue centralizing of authority." It urges thoughtful citizens to:

Examine every new plea of government aid, every proposal to delegate further authority to government.

Resist each such demand until it has been proven beyond question that the ultimate common good can best be served in no other way.

The booklet is published under the title "Better Health for the American People." It undertakes an analysis of the reasons why a democratic system of health care offers greater promise than any other system.

Five objectives for the attainment of better health care by democratic means are set forth in the booklet. They are:

1. Complete Health Prepayment Service for the Self Supporting.

2. Cooperation with Government to Furnish Health Care for Those Unable to Pay.

3. Improvement of Health Facilities and Standards.

4. Health Education of the Public.

5. National Coordination of Health Activities.

Copies of the booklet are available upon request to the Michigan Health Council, Washington Boulevard Building, Detroit 26, Michigan.

The Council was incorporated a year ago as a joint coordinating and educational organization of the Michigan State Medical Society, the Michigan Hospital Association, Michigan Medical Service and Michigan Hospital Service.

"March of Dimes" of the National Foundation for Infantile Paralysis, Inc.

Topping last year's unprecedented donations by more than 50 per cent, the American people contributed \$16,589,874 to the 1945 March of Dimes of the National Foundation for Infantile Paralysis, as against \$10,973,491 for 1944, it was announced recently from the national headquarters at 120 Broadway, New York City. . . .

Of the total amount of funds raised, 50 per cent is allocated to national headquarters of the National Foundation to finance research into the cure and prevention of infantile paralysis and a broad educational program which includes scholarships and fellowships in orthopedic nursing, physical therapy, orthopedic surgery, virology and health education, as well as to maintain an emergency epidemic fund to aid County Chapters in areas hard hit by outbreaks of the disease.

The other half of the March of Dimes funds is retained by County Chapters of the National Foundation to carry on year-round services to infantile paralysis victims in the 3,070 counties of the United States.

The incidence of the disease this year is high, although there is marked improvement over last year when the United States had its second largest epidemic of infantile paralysis with a total of 19,272 cases. . . .

The total amount collected in California in the March of Dimes campaign was \$1,592,164.74, being exceeded only by New York, and followed by Pennsylvania.

VD Allotments

A total of \$8,756,876 has been allotted by the Venereal Disease Division of the U. S. Public Health Service to the States and Territories for venereal disease control for the fiscal year ending June 30, 1946. Of the total, \$4,378,438 is to be matched by the States. This will assure a combined Federal and State venereal disease control budget of more than 13 million dollars for the year.

The allotment of Federal funds represents a national expenditure of 7 cents per capita for the control of venereal disease.

Allotments were made to the individual States on the basis of population, financial need, and the magnitude of

the general venereal disease problem in each State.

The allotments for California, and the amount of the allotments per capita follows:

	Allotment	Per Capita
California	\$409,036	\$.05

Physician Statistics

Medical Mailing Service, Inc., in a recent circular, gave the following statistical information (approximate):

Active Practicing Physicians in the United States (All Ages)	108,809
Internes in the United States	5,583
Active Practicing Physicians Over 70 Yrs. of Age	14,966
Active Practicing Physicians Under 70 Yrs. of Age	93,823
Active Practicing General Practitioners (All Ages)	62,134
Active Practicing General Practitioners Under 70 Yrs.	51,491
Active Practicing General Practitioners Over 70 Yrs.	10,643

Specialists

(Note. The requirements whereby a physician was construed to be a "specialist" were not given. However, the figures have a relative or suggestive interest.)

Allergists	252
A.L.R. (Ear, Nose and Throat)	1,460
Anesthetists	623
Bacteriologists	64
Cardiologists	432
Clinical Pathologists	306
Dermatologists	1,081
Gastroenterologists	237
Gynecologists	915
Industrial Practice	1,487
Internal Medicine	4,389
Neurologists	107
Neuro-Psychiatrists	1,208
Neurological Surgeons	85
O.A.L.R. (Eye, Ear, Nose and Throat) ...	3,970
Obstetricians	1,835
Obstetrician and Gynecologist	3,234
Ophthalmologists	1,572
Orthopedic Surgeons	989
Pathologists	612
Plastic Surgeons	82
Pediatricians	3,365
Proctologists	613
Psychiatrists	865
Public Health	1,272
Radiologists and Roentgenologists	1,804
Surgeons (General)	11,109
Tuberculosis	943
Urologists	1,764

Total Specialists 46,675

Tests of the Effectiveness of DDT in Anopheline Control

An article on "Effectiveness of DDT in Anopheline Control" appears in *Public Health Reports*, issue of August 10, 1945, copy of which may be secured from the U. S. Superintendent of Documents, Washington (25), D. C. (Price, 10c). From this article by S. W. Simmons, Sanitarian, (R), and Staff, United States Public Health Service, the following excerpts:

The return of troops with malaria to anopheline-infested areas in this country creates an urgent need for improved methods of malaria control. This rapidly growing problem is superimposed on that of continued protection of troops in hyperendemic combat areas. In meeting these problems the use of the chemical commonly known as DDT (2,2-bis(parachlorophenyl) 1, 1, 1-trichloroethane) is indicated to be an improvement of the first magnitude.

Work was recently initiated at the Henry Rose Carter Memorial Laboratory in Savannah, Ga., to develop practical working information, procedures, materials and equipment for use on the Malaria Control in War Areas

program. Determination of the effectiveness and practicability of DDT in the control of anopheline mosquitoes is a major phase of work. At the outset, data previously secured by other workers was drawn on heavily as a foundation. Information secured from reports and personal conferences with workers from the Orlando, Fla., laboratory of the Bureau of Entomology and Plant Quarantine, the National Institute of Health, and various contractors with the Office of Scientific Research and Development has been particularly helpful.

The work on DDT in mosquito control has fallen into two principal categories: First, its use as a residual house spray, and secondly, its use as a larvicide. As a larvicide DDT is distinctly promising but results from its use as a residual spray are spectacular. No other material has been shown to impart lethal effects to sprayed surfaces over a period of time comparable to that obtained with DDT. It is this ability, when conjoined with established mosquito control practices, that has caused malariologists to conceive the practicability of malaria eradication. . . .

DDT is easily applied as a larvicide with existing equipment without appreciable modification, and the cost of materials is less than one-fifth that of fuel oil. Labor cost involved is approximately the same as for oiling.

It may be summarily stated that the work described is of a preliminary nature. A final definition on the toxic properties and use of DDT presents a striking challenge to all who are interested in malaria control.

SUMMARY

The average tenant house can be treated with a DDT residual spray at a cost of about \$1.50 to \$1.75, including labor, materials, and overhead, but exclusive of initial outlay for heavy equipment. The spray can be applied either with a hand-pressure sprayer or with a power machine, and at a dosage of 200 mg. of DDT per square foot of surface area has effected a 60- to 90-per cent mortality of wild mosquitoes in unoccupied houses 20 weeks subsequent to treatment. A residual toxicity of this duration suggests that one treatment per year might be sufficient in the more northern malaria zones of this country, but two treatments will probably be required in the southern zones. . . .

Safer to Land With Feet Close Together

Aside from enemy action, the statistical chance of a paratrooper being injured in a descent has been reduced to 1 per cent and is falling even lower than that.

The reduction in the number of parachute injuries was attributed largely to the teaching of new landing methods.

The old method of landing, it was explained, was with the feet approximately the width of the hips apart. In the new technique, the feet are held together on contact with the ground, with the leg bent slightly at the knees and the weight of the body slightly forward over the feet.

This has reduced considerably ankle fractures, which often used to plague parachutists.

Fyodor Dostoevski (1821-1881).—Within a minute of the order to fire, came work that the death sentence imposed on Dostoevski and the other revolutionists had been commuted to penal servitude in Siberia. This imprisonment, averred Dostoevski, cured his nervous disorders, but it also brought upon him the scourge of epilepsy. From birth to death, the life of this great novelist was one long succession of physical, social and spiritual misery. As a writer, Dostoevski made the field of morbid psychology his own.—Warner's *Calendar of Medical History*.

MISCELLANY

Under this department are ordinarily grouped: News Items; Letters; Special Articles; Twenty-Five Years Ago column; California Board of Medical Examiners; and other columns as occasion may warrant. Items for News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings†

California Medical Association. Session will convene in Los Angeles. Dates of the seventy-fifth annual session, to be held in 1946, will be announced later.

American Medical Association. The 1946 Session is scheduled for San Francisco. Date not yet announced.

The Platform of the American Medical Association

The American Medical Association advocates:

1. The establishment of an agency of Federal Government under which shall be coordinated and administered all medical and health functions of the Federal Government, exclusive of these of the Army and Navy.

2. The allotment of such funds as the Congress may make available to any state in actual need for the prevention of disease, the promotion of health, and the care of the sick or proof of such need.

3. The principle that the care of the public health and the provision of medical service to the sick is primarily a local responsibility.

4. The development of a mechanism for meeting the needs of expansion of preventive medical services with local determination of needs and local control of administration.

5. The extension of medical care for the indigent and the medically indigent with local determination of needs and local control of administration.

5. The extension of medical care for the indigent and the medically indigent with local determination of needs and local control of administration.

6. In the extension of medical services to all the people, the utmost utilization of qualified medical and hospital facilities already established.

7. The continued development of the private practice of medicine, subject to such changes as may be necessary to maintain the quality of medical service and to increase their availability.

8. Expansion of public health and medical services consistent with the American system of democracy.

(Ed. Note.—Interpretative comments on principles included in the A.M.A. platform appear in *CALIFORNIA AND WESTERN MEDICINE* for December, 1939, on pages 394-395. For subsequent comment, see *J.A.M.A.*, June 24, 1944, pp. 574-576. Also, August, 1945, *CALIFORNIA AND WESTERN MEDICINE*, pp. 61-62.)

Medical Broadcasts*

The Los Angeles County Medical Association:

The following is the Los Angeles County Medical Association's radio broadcast schedule for the current month, all broadcasts being given on Saturdays:

KFAC presents the Saturday programs at 10:15 a.m., under the title, "Your Doctor and You."

In September, KFAC will present these broadcasts on the following Saturdays: September 1, 8, 15, 22, and 29.

The Saturday broadcasts of KFI are given at 9:45 a.m., under the title, "The Road to Health."

"Doctors at War":

For radio broadcasts of "Doctors at War" by the American Medical Association, see *J.A.M.A.*

† In the front advertising section of *The Journal of the American Medical Association*, various rosters of national officers and organizations appear each week, each list being printed about every fourth week. In *CALIFORNIA AND WESTERN MEDICINE*, some rosters appear in every second or third issue.

* County societies giving medical broadcasts are requested to send information as soon as arranged.

Pharmacological Items of Potential Interest to Clinicians*:

1. *On the Sociological Front:* Worth reading is L. Mumford's *City Development: Studies in Disintegration and Renewal*; maybe Honolulu should have followed Mumford's advice (Harcourt, Brace, N. Y., 248 pp., \$2, 1945). B. Malinowski analyses *The Dynamics of Culture Change* (Yale Press, New Haven, 171 pp., \$2.50, 1945). Laura Thompson and Alice Joseph discuss *The Hopi Way* (to peace), and note high IQ of Hopi children (University Chicago Press, 151 pp., \$3, 1945). D. Abrahamsen dilates on *Crime and the Human Mind* (Columbia University Press, N. Y., 244 pp., \$3, 1944). Do you know the Social Work Year Books? 8th issue, 1945, edited by R. H. Kurtz, 620 pp., at \$3.25, from Russell Sage Foundation, N. Y. Along the usual line is O. S. English and G. H. J. Pearson's *Emotional Problems of Living: Avoiding the Neurotic Pattern* (Norton, N. Y., 438 pp., \$5, 1945). M. F. A. Montagu concludes that intelligence tests at last war show correlation with socio-economic history (*Amer. J. Psych.*, 58:161, 1945). J. N. Morris examines health of 440 millions in India, in light of population crisis, and sees little hope (*Lancet*, 1:743, June 16, 1945). V. Bush looks at tomorrow, bravely speculating on how we may think mechanically with logic machines (*Atlantic*, 176:101, July, 1945). And what is your idea of Federal subsidy for scientific work? C. Binger gives excellent and brief popularization of *The Doctor's Job* (Norton, N. Y., \$3.50, 1945).

2. *On Cells and Tissues:* R. Hober offers important *Physical Chemistry of Cells and Tissues* (Blakiston, Philadelphia 5, \$9, 1945). Volume 5 of *Advances in Enzymology and Related Subjects* is edited by F. F. Nord and C. H. Werkman (Interscience Publ., N. Y., 268 pp., \$5.50, 1945). E. Schrodinger also asks *What Is Life?* (Macmillan, N. Y., 91 pp., \$1.75, 1945). R. A. Moore edits Volume 11 of Biological Symposia on *Ageing and Degenerative Diseases* (Cattell Press, Lancaster, Pa., 242 pp., \$3, 1945). R. A. Moore also offers new text on Pathology (W. B. Saunders, Philadelphia 5, 1338 pp., \$10, 1945).

3. *On Antibiotics:* L. F. Moldavsky & Co. of Harmon Gen. Hosp. warn against danger of thrombus formation with high doses of penicillin and suggest its use as a coagulant in hemorrhagic diseases (*Science*, 102:38, July 13, 1945). L. Loewe & Co. report plasma conc. of p-aminohippuric acid of 10 mgm./100 cc. (non-toxic) greatly prolongs penicillin action (*Proc. Soc. Exper. Biol. Med.*, 58, 298, 1945). J. T. Weld notes antibiotic action of extracts of *Tillandsia usneoides* (Spanish moss) (*Ibid.*, 59:40, 1945). J. A. Herrick observes fungicidal action of clavacin (*Ibid.*, p. 41). D. Jones & Co. find evidence for antiviral action of actinomycin A (*Science*, 101:665, June 29, 1945). D. Perlstein & Co. propose urinary estimation of glucuronic acid as measure of penicillin absorption (*Science*, 101:562, June 1, 1945). W. F. Elias and J. Durso note little absorption of streptomycin from gut and possible presence of body inhibitor (*Ibid.*, p. 589, June 8, 1945). S. Waksman proposes excellent method for standardization of streptomycin (*Science*, 102:40, July 13, 1945). W. M. M. Kirby

* These items submitted by Dr. Chauncey D. Leake, formerly director of the University of California Pharmacological Laboratory, now dean of the University of Texas Medical School, Galveston, Texas.

describes properties of penicillin inactivator from penicillin resistant Staph. (*J. Clin. Invest.*, 24:165-175, 1945).

4. *On Hormones*: Just noted is comprehensive discussion of synthetic hormones by G. Masson (*Rev. Canad. Biol.*, 3:491-582, 1944). J. P. Chu and S. S. You (Chengtu), offer evidence that follicle stimulating and luteinizing hormones of pituitary are under direct regulation of thyroid (*J. Endocrin.*, 4:115, 1945). J. E. Caldwell & Co. find specific agent in bone marrow able to stimulate leucopoiesis in benzene poisoned rabbits (*Am. J. Med. Sci.*, 209:717, 1945). I. J. Kligler & Co. observe that environmental change from dry to humid with constant temperature activates thyroid, explaining our pep at Galveston (*Proc. Soc. Exper. Biol. Med.*, 58:286, 1945).

5. *On Varia*: E. A. Stead, Jr. & Co., report neat studies on cardiac output (*J. Clin. Invest.*, 24:326-344, 1945). A. M. Martinex offers full survey of leucocyte variations in pulmonary Tb (*Publ. Cent. Invest. Tisiol.*, 8:281-420, 1945). C. Torda and H. G. Wolff claim muscle fatigue may be result of decrease in local synthesis of acetyl-choline during prolonged muscle contractions (*Proc. Soc. Exper. Biol. Med.*, 59:13, 1945). P. A. Neal and Co. report fully on low toxicity and potential danger of aerosols containing DDT (Supplements No. 177 and 183 to *Pub. Health Rep.*, Washington, 1945). J. M. Schneck offers interesting bibliography on bibliography (Psychiatrists, please note!) and hospital libraries (*Bull. Med. Lib. Assoc.*, 33:341, 1945). G. King and L. T. Ride correlate thiamine deficiency with pregnancy toxemia (*J. Obs. Gyn. Brit. Emp.*, 52:130, 1945). C. P. G. Wakeley skillfully analyses effects of underwater explosions on human body (*Lancet*, 1:715, June 9, 1945).

Baruch Committee on Physical Medicine.—The Baruch Committee on Physical Medicine, established in 1944 by Mr. Bernard M. Baruch of New York, with a gift of \$1,190,000, is achieving results beyond its most hopeful expectations. This is made clear in its first annual report.

In creating the committee and bestowing his benefaction in April, 1944, Mr. Baruch announced that its purpose would be to advance and encourage the knowledge and practice of physical medicine throughout the nation and the world—with the special aim of bringing its benefits to disabled veterans of the war, and assisting in their rehabilitation and restoration to working health and usefulness.

The committee states: Physical medicine is that branch of medical science which, in conjunction with or succeeding surgery and hospitalization, undertakes the long course of restoration to working activity by the employment of heat, light, water, electricity, massage, manipulation, exercise and mechanical devices. It is a field brought into prominence and importance by the last war and rendered immeasurably important by the present one, both to the medical profession and mankind. The field, previously, had been imperfectly understood and much neglected.

The medical schools of ten universities and colleges—their chain extending clear across the United States—are participating in the original gift of \$1,190,000 by Mr. Baruch, and the report lists the various activities and achievements which have been made possible to them by its bestowal.

In the list of grants to different institutions, the University of Southern California becomes the recipient of an allocation of \$30,000.

The chairman of the Baruch Committee on Physical Medicine is Doctor Ray Lyman Wilbur, Chancellor of Stanford University.

Medical Bill.—With the nation's medical bill in 1944 totaling 4 billion dollars and a capital investment in hospital plant and equipment of six billions, medicine today is one of the big businesses of America. The direct consumers of medical care paid 3 billions of last year's bill, expenditures by federal, state and local governments were 800 millions, and the balance was contributed by industry and philanthropy, a survey revealed.

Scholarships for Physical Education Courses.—In a recent announcement, the National Foundation for Infantile Paralysis, with headquarters at 120 Broadway, New York 5, states that it has allocated an appropriation of \$1,267,600 by the National Foundation which makes it possible to offer scholarships to young men and women who have been graduated from accredited schools of nursing or physical education, or who have completed a minimum of two years of college work with emphasis on biology and other basic sciences. Candidates with the proper prerequisites will be trained at physical therapy schools approved by the Council on Medical Education and Hospitals of the American Medical Association.

This program was developed with the advice of a special committee composed of Dr. Irvin A. Abell, of Louisville, Ky., chairman, and Dr. Donald B. Armstrong, of New York; Dr. Max M. Peet, of Ann Arbor, Mich.; Dr. Morris Fishbein, of Chicago; Dr. Arthur L. Watkins, of Boston; Dr. M. G. Westmoreland of Chicago; Miss Jessie Stevenson, of New York, president of the American Physiotherapy Association; Miss Lucille Daniels, acting director of the division of physical therapy, Stanford University, Calif.; Dr. Don W. Gudakunst, medical director of the National Foundation; Miss Catherine Worthingham, director of technical education for the Foundation, and Basil O'Connor.

The committee feels that the lack of qualified physical therapists today has hindered physicians from making a wider use of physical therapy in various medical specialties.

Recent Mortality Rates for United States.—The general death rate for the United States for the first quarter of 1945, as estimated from a 10 per cent mortality sample, is 11.3 per 1,000 population. This is 7 per cent lower than the corresponding rate of 12.1 for the same months of 1944.

In comparing the mortality experience for the first quarter of 1945 with that for the first quarter of 1944, it should be pointed out that death rates for the respiratory diseases and consequently the general death rate are subject to considerable variation. In the 11-year period 1933 to 1943 the general death rate for the United States varied from a maximum of 13.3 in 1937 to a minimum of 11.3 in 1942. Thus, it will be seen that the base with which comparison is made is somewhat high and that the first quarter rate for 1945 compares favorably, not only with that for the preceding year, but also with the low rate for the corresponding period of 1942.

The more favorable mortality record for the first quarter of this year over that for last year comes principally from lower death rates for pneumonia and influenza and the cardiovascular-renal group of diseases. Last year there was an increased mortality from these causes as a result of an epidemic of upper respiratory infections. The pneumonia and influenza death rate for the current quarter (37.7 per 100,000 population) is only about three-fifths as high as that for the first 3 months of 1944, and is lower than in any previous first quarter. The death rate for the cardiovascular-renal group of diseases accounted for about half of the total deaths was 5 per cent lower in the first quarter of this year than in the

same period last year, and was approximately the same as the first quarter of 1943.

Information for Disabled Veterans.—The "Public Affairs Committee," 30 Rockefeller Plaza, New York 20, is a non-profit educational organization that has brought out many interesting pamphlets. A recent brochure has the title, "Straight Talk for Disabled Veterans." The authors describe a number of actual instances out of tens of thousands that could be cited to prove that men bearing all kinds of physical losses can achieve economic independence and build for themselves lives that are as satisfying and happy as anyone's. They point out that one company alone employs nearly 12,000 disabled men on regular jobs. They tell of cases in which men earned more after being disabled than before their injury.

Disabled men are warned, however, that success does not come without great effort. They are urged to co-operate with their physicians and nurses in activities designed to overcome the effects of their injuries, and to get the best training possible for their future jobs.

By law the disabled veteran is guaranteed an opportunity to prepare for work in which he will not find himself at an economic disadvantage. But the veterans are warned that the law is not going to be of much help unless they take some responsibility for discovering and training for the kind of work they are capable of doing.

University of California Plans Continuation Courses for Dentists.—Continuation courses in dentistry for dental officers returning from the armed services or for dentists who wish to review the latest phases of dentistry are being planned by the College of Dentistry, on the San Francisco campus of the University of California.

Sixteen types of classes are being scheduled, including two to six weeks' intensive instruction in the handling of certain difficult problems, and others to continue for one or more semesters will prepare for advanced specialties such as orthodontics or prosthesis. Graduate studies will be offered for those students who wish to specialize in dental medicine or build up a biological background for research and teaching.

Dr. Gordon Fitzgerald, head of the division of dental roentgenology, is in charge of the program. There is an excellent opportunity for returning dental officers to study for dental specialties, since they will not have established practices to leave or office overhead to worry about.

Bulletins of the Health Advisory Council of the Chamber of Commerce of the United States.—The Washington, D. C., office of the Chamber of Commerce of the United States of America, through its "Health Advisory Council," from time to time sends to the newspaper and magazines, releases dealing with health and disease problems. The value of this educational work is hard to estimate. Excerpts from their Bulletins follow:

Health Education Sponsored by Doctors Reduces Appendicitis Deaths by Two Thirds.—Deaths of patients with acute appendicitis in one state decreased from 3.39 per cent to 1.1 per cent in five years as a result of preventive medicine and surgery and increased public knowledge.

The latest report of the Pennsylvania State Medical Society's Commission on Acute Appendicitis Mortality shows that public health education stimulated by doctors, and aided by schools, civic organizations, and other lay groups, saves lives.

In Pennsylvania, where the State Medical Society has been very active in educating the public regarding appen-

ditis, the number of deaths from appendicitis-peritonitis has been reduced from 1,252 in 1930, to 886 in 1940, and 624 in 1942.

The commission's report shows that delay in seeking medical attention or in going to a hospital, and the taking of laxatives are the all-important controllable factors in deaths from acute appendicitis. The danger to acute appendicitis patients from taking laxatives more than doubled from 1937 to 1942, the Pennsylvania study revealed, as is shown in the following table:

1937		1942
1 in 6 died	No laxative taken	1 in 3 died
1 in 4 died	One laxative taken	1 in 2 died
1 in 4 died	More than one laxative taken	2 in 3 died

Good advice regarding appendicitis is contained on stickers which Pennsylvania doctors are using as seals on letters, and distributing through schools, as follows:

APPENDICITIS—PLAY SAFE!

THAT PAIN IN YOUR STOMACH MAY MEAN

1. Take NO laxatives, liquids or food.
2. See your DOCTOR at once.
3. Go to the hospital if he advises operation.

REMEMBER—laxatives and delay cause spreading peritonitis and death—1 in every 3 cases.

PLAY SAFE WITH YOUR OWN LIFE—DON'T DELAY!

(Signed) Medical Society of the State of Pennsylvania.

Polio Precautions: August and September are the months during which the yearly peak of poliomyelitis, or infantile paralysis, cases occurs in most localities, and during which it is advisable to keep in mind precautions that help prevent spread of the disease.

The most important fact to remember about infantile paralysis is to call a doctor promptly for anyone who has any of its symptoms. These include moderate fever, headache, vomiting and constipation, drowsiness alternating with irritability, stiffness of neck and spine, trembling and other signs which a doctor can detect better than a patient.

Although the chances of an individual acquiring infantile paralysis are ordinarily only about 1 in 10,000 during a year, and only 1 in several hundred even during an epidemic, precautions are advisable when poliomyelitis is prevalent.

Important poliomyelitis control measures include:

Early diagnosis and reporting of the disease; isolation of infected persons for two weeks from onset; immediate disinfection of all nose, throat, or other bodily discharges of infected persons, and of articles soiled by such discharges; search for and expert diagnosis of sick children to locate unrecognized and unreported cases.

During epidemics all children with fever should be isolated in bed until they have been examined by a doctor; bed rest is particularly important for persons found to have the disease. Children should be protected as much as possible against unnecessary contact with persons outside their own homes during epidemics. Unnecessary travel, physical strain, and nose and throat operations should be avoided when the prevalence of poliomyelitis is high.

On the meaning of "Psychosomatic Medicine": One of the newest phrases in your doctor's vocabulary is "psychosomatic medicine," and you should know what it means to understand an interesting and important new strategy developed by physicians in their fight against ill health.

In everyday language, "psychosomatic" means "mind-body." "Psychosomatic Medicine" is concerned with the way emotional and physical disturbances influence each

other, particularly with bodily disorders which are brought on, made worse, or prolonged by emotional disturbances.

Physical illnesses which doctors have found to be frequently caused by or associated with disturbed emotions include gastric ulcer, constipation, some skin diseases, headaches, asthma, high blood pressure, various heart diseases, rheumatic fever and rheumatic heart disease, diabetes, and even broken bones.

Physicians tell us that very often the patient is not consciously aware of the emotional disturbance that is causing his heart or stomach trouble, or some other physical disorder; the original cause of the upset emotions may have occurred years previous to the physical illness.

Jealousy, repressed fear or rage, resentment, and guilt are some of the emotions which may affect the nervous system and, in turn, the organs or tissues of the body in such a way as to bring on physical illness that prescriptions or surgery alone cannot cure.

California Heart Association Meetings.—The Annual Postgraduate Symposia on Heart Disease held under the auspices of the California Heart Association will be given as follows:

In *San Francisco*, on October 17, 18, 19 and 20 (Wednesday through Saturday). Physicians may register with the San Francisco Heart Committee, 604 Mission Street, San Francisco, 5, Mrs. Gladys Daniloff, Secretary.

In *San Diego*, on October 22nd (Monday). Symposium is sponsored by the San Diego County Medical Society. (Dinner meeting place to be announced later.)

In *Los Angeles*, on October 24, 25, and 26 (Wednesday through Friday). Physicians may register with the Los Angeles Heart Association, 117 West 9th Street, Los Angeles, 15, Mrs. Ruth Lynch, Executive Secretary.

Among the guest speakers will be Dr. Samuel A. Levine of Boston, Colonel Irving S. Wright, U. S. Army Medical Corps, Dr. James J. Waring, Professor of Medicine, University of Colorado School of Medicine.

What G. I.'s Want When They Return.—While Drew Pearson was on vacation Sgt. Max Novack, who writes "What's Your Problem?" for *Yank*, the Army weekly, contributed a guest column on the returning soldier. The following excerpts are from "Washington Merry-Go-Round" in *San Francisco Chronicle*, August 27):

... The chief thing that the man in uniform wants is to return to civilian ways of life. No one who has not had to forego the right of individual action for from two to four years can possibly understand the importance of being able to make his own decisions.

... However, many G.I.s realize that merely providing free schooling, Government-guaranteed loans and unemployment protection does not mean that all their problems will be solved by the G.I. Bill of Rights.

... Many of the G.I.s also want compulsory high school education for all, slum clearance, low-cost housing projects and universal or group hospital and medical care. If these come into being, they feel that the better world they have heard so much about will actually come about in their and their children's time. ...

U. S. Population Estimated 139,682,000.—A population increase of more than eight million was registered during the five years ended July 1, almost equal to the 8,894,000 increase in the 10 years ended in 1940, the Department of Commerce has announced.

The population on July 1, 1945, was estimated at 139,682,000.

In the 3½ years ended July 1, births totaled 10,569,000.

This was more than double the 5,137,000 deaths, not counting war casualties.

The marriage rate reached a new height at 13.5 per 1,000 of population as of 1942. In the 3½ years ended July 1, 1945, marriages totaled 5,477,000.

Peak employment, reached in July, 1943, was nearly 55 million. In late 1944, factory employment was 17,250,000, about double that of 1939.

Female employment increased more than seven million in the five years between 1940 and 1945, to 18,200,000.

Unemployment in July, 1944, had hit a new low of one million, or less than 2 per cent of the labor force. This compared with an unemployment ratio of 15 per cent of the total labor force or 8,410,000 in July, 1940.

MEDICAL JURISPRUDENCE†

HARTLEY F. PEART, ESQ.

San Francisco

Birth Certificates

California Health and Safety Code, Section 10150, provides that the birth of each child born in the State of California must be registered pursuant to statute. Except in sparsely settled districts, or where there is no direct mail communication with the County Seat, a certificate of birth must be filed within four days after the date of each birth with the local Registrar of the district in which the birth occurred.

If a physician was in attendance upon the birth, the duty of filing the certificate is imposed, by Section 10178 of the Health and Safety Code, upon the physician. Section 10180 also provides that the father or mother of the child, the householder or owner of the premises where the birth occurred, or the manager or superintendent of the public or private institution where the birth occurred, each in the order named, shall, within ten days after the date of the birth, report the fact of birth to the local Registrar. Under Section 10180, any information which the physician is unable to fill in on the form of birth certificate prescribed by the statute, must be obtained by the local Registrar from the person reporting the birth. There is, then, a double requirement imposed by the Vital Statistics statute, viz.: (1) That the attending physician file a birth certificate; and (2) That one of the other persons named in Section 10180 report the birth. The form of birth certificate prescribed by Section 10200 of the Health and Safety Code requires that the attending physician sign a certificate as to his attendance at birth, including a statement of the hour of birth.

We have found no cases in California interpreting Section 10178, the section which requires the attending physician to file a birth certificate, and no case in which the validity of this section has been questioned. It has been held in other states, however, that the state may, in the exercise of its police power, lawfully require a physician to report to the proper authority for registration of the fact of a birth which has come under his or her observation. *Robinson v. Hamilton* 60 Iowa 134, 25 Am. Jur. 320.

A decision of the Ohio Supreme Court, *State v. Boone*, 84 Ohio 346, is summarized in Volume 25 Am. Jur. at page 320, as follows:

"But a statute requiring an investigation and notification as to facts not necessarily or naturally coming

† Editor's Note.—This department of CALIFORNIA AND WESTERN MEDICINE, presenting copy submitted by Hartley F. Peart, Esq., will contain excerpts from the syllabi of recent decisions and analyses of legal points and procedures of interest to the profession.

within the knowledge of the attending physician or midwife—namely, whether the birth is legitimate or illegitimate—and, except in case of illegitimacy, the full name, residence, color or race, birthplace, age and occupation of the father, also the maiden name in full, residence, color or race, birthplace, age, and occupation of the mother, the number of this child of the mother, and the number of her living children, has been held to be unconstitutional as requiring the physician or midwife to search out non-professional information without compensation, and as being not a valid exercise of the police power because unnecessary, unreasonable, and arbitrary."

And it is further stated:

"Some courts, however, have taken the view that a statute requiring on birth or death certificates information not within the personal knowledge of the physician is a valid exercise of the legislative discretion, but that the physician is required thereunder only to make a bona fide effort to secure the information, and that having done so, he is not liable for a penalty."

The California statute gives no indication as to who is a "physician" within the meaning of the section requiring the attending physician to file a birth certificate. In Maryland it has been held that a duly licensed and registered osteopath is to be considered a physician within the meaning of the Vital Statistics statute, unless the statute expressly precludes the acceptance of a certificate signed by an osteopath.

The California Vital Statistics statutes impose an additional requirement on attending physicians in the case of still-born children. In the case of a still-born child who has advanced to the fifth month of uterogestation, a certificate of still-birth must be filed with the local Registrar, just as in the case of a death certificate. Health and Safety Code, Section 10328 provides that the medical certificate of still-birth shall be signed by the attending physician and shall state the cause of the still-birth, if known.

LETTERS†

Concerning "A Central Medical Registry":

(COPY)

THE AMERICAN REGISTRY OF PATHOLOGY
Under the Auspices of National Research Council
Registry Office: Army Medical Museum
Washington 25, D. C.
Washington, D. C., July 30, 1945.

To the Editor:—We wish to express hearty agreement with the ideas advanced by Dr. Askey in your June number, on page 317, concerning the need for a central medical registry.

The Army Institute of Pathology, under the aegis of the National Research Council and various national medical societies, for some time has been maintaining 13 Registries, the first of which was founded by Colonel George R. Callender in 1922. Material is received from pathologists throughout this country and overseas, and one of the Registries (Bladder Tumor) now includes specimens from nearly 5,000 patients, who have been followed up yearly. These data will soon be ready for exhaustive and definitive analysis. It is only by pooling experience and material that accurate basis for making prognoses can be established and the natural history of diseases studied. We should like to impress on readers of your JOURNAL that material relevant to the Registry fields (General Tumor, Dermal, Lymphatic, Ophthalmic, Otolaryngological, Bladder, Kidney, Prostate, Chest, Dental and Oral, Neuropathologic, Orthopedic, Veterinary and Gerontologic) should be forwarded to the Institute.

† CALIFORNIA AND WESTERN MEDICINE does not hold itself responsible for views expressed in articles or letters when signed by the author.

Representative examples of the specimens entered in each Registry have been used to prepare Study Sets and Atlases, which are in constant use by physicians preparing for specialty Board examination or reviewing fields of particular interest. These materials may be borrowed on application to the Institute Director, Army Institute of Pathology, Army Medical Museum, Washington 25, D. C.

(Signed) J. E. ASH,
Colonel, Medical Corps,
Director.

Concerning Taxation of X-Ray Films or Negatives:

For reference to the exact wording of the California Board of Equalization's revised ruling, a copy of the Board's letter of June 11, 1945, is printed below. (For reference in this issue of C. and W. M., see page 135.)

(COPY)

STATE BOARD OF EQUALIZATION
STATE OF CALIFORNIA
Sales Tax Division

Sacramento 14, June 11, 1945.

Peart, Baraty & Hassard,
111 Sutter Street,
San Francisco 4, California.

Attention: Mr. Hartley F. Peart.

Gentlemen:

This is with reference to our previous correspondence regarding the application of Sales and Use Tax Ruling 23, Subdivision C, as amended April 1, 1945, to x-ray laboratories operated by radiologists.

We have advised our staff that the tax applies to the fair retail value of x-ray pictures or negatives only when there is an actual sale, i.e., transfer of title, by the producer thereof. If the producer retains ownership of the pictures or negatives, he is the consumer of film and other materials used in their production, and the tax is therefore applicable with respect to the sale of such materials to him.

We believe that the foregoing will clarify many of the problems that are currently arising with respect to the application of the ruling.

Very truly yours,

(Signed) E. H. STETSON,
Associate Tax Counsel.

Concerning "Bulletin" of Alameda County Medical Association:

(COPY)

ALAMEDA COUNTY MEDICAL ASSOCIATION
364 Fourteenth Street, Oakland 12, California
Oakland, August 14, 1945.

George H. Kress, M.D., Editor, Addressed.

Dear Doctor Kress:

Thanks for your generous remarks regarding our first issue of "The Bulletin" of the Alameda County Medical Association.

These have been received from all parts of the Nation....

Seriously, however, we realize that there are a number of things regarding "The Bulletin" that need very much to be improved, and shall look forward to timely criticism, bouquets, or brickbats whenever they are deserved.

Cordially yours,

ALAMEDA COUNTY MEDICAL ASSOCIATION,
Milton H. Shutes, Editor,
(Signed) ROLLEN W. WATSON,
Executive Secretary.

Concerning Numbers of Valid Signatures Needed for an Initiative Law:

(COPY)

STATE OF CALIFORNIA
Office of the Secretary of State
Sacramento, 3

Sacramento, August 2, 1945.

George H. Kress, M.D., Secretary,
San Francisco.

Dear Doctor:

In reply to your letter of August 1, we advise that the number of signatures necessary to place an initiative upon a ballot at the present time is 178,764.

Yours very truly,

(Signed) FRANK M. JORDAN,
Secretary of State.

Concerning Examinations by American Board of Ophthalmology:

AMERICAN BOARD OF OPHTHALMOLOGY

To the Editor.—Due to transportation difficulties the examination of the Board, originally scheduled for Chicago, October, 1945, has been postponed to January 18th to 22nd inclusive, 1946.

Examinations in 1946, will be held in Chicago, January 18th, through 22nd; Los Angeles, January 28th, through February 1st; New York, May or June; Chicago, October.

Concerning Need of Physicians for Posts in China:

UNITED NATIONS

RELIEF AND REHABILITATION ADMINISTRATION

August 31, 1945.

To the Editor:

May I ask you to be good enough to help us by bringing the following to the notice of the members of your Association?

The Chinese Government has requested UNRRA to provide, as soon as possible, some 200 field personnel of the following categories to strengthen the available Chinese personnel. Such personnel will be required to head the respective services in hospitals of 100 or 250 beds, which will be established in areas recently liberated from the Japanese.

General Surgeons
Orthopedic Surgeons
Genito-Urinary Surgeons
Gynecologists and Obstetricians
General Physicians
Dermatologists and Syphilologists
Ophthalmologists
Otolaryngologists
Radiologists
Dentist
Pediatricians
Laboratory Technicians
X-ray Technicians
Sanitary Engineers
Public Health Engineers
Public Health Nurses
Clinical Nurses

General practitioners with some specialist experience will be acceptable. Candidates should be under 55 years of age and in good physical condition.

Will those interested please write to me at UNRRA, 1344 Connecticut Avenue, N.W., Washington 25, D. C.

Yours sincerely,

(Signed) SZEMING SZE, M.D.,
Chief, Far East Section,
Health Division.

Outpatient Penicillin Therapy of Sulfonamide Resistant Gonorrhea

Under the above caption, from the Venereal Disease Clinic, Christian County Health Department, Hopkinsville, Ky., William F. Fidler, Passed Assistant Surgeon (R), United States Public Health Service, writes as follows in the *Journal of Venereal Disease Information* of the United States Public Health Service for July, 1945:

The efficacy of penicillin in the treatment of gonorrhea was established early in the clinical study of the drug. However, treatment schedules covered relatively long periods of time, the drug being given at either 3- or 4-hour intervals, or by continuous intravenous drip. In April, 1944, Cohn, Studdiford, and Grunstein published studies on the relatively rapid treatment of gonorrhea in females. The treatment period ranged from 3 to 12 hours, injections being given at 3-hour intervals with a total dosage of 50,000 to 100,000 units. A failure was observed in 1 patient who received 50,000 units administered in 3 hours. The Army has been using a schedule of 100,000 units given over a 12-hour period with a 3-hour interval between doses. . . .

SUMMARY

1. From the experience of other investigators, it would seem that a greatly shortened penicillin treatment schedule for gonorrhea is effective.
2. A 4-hour schedule, consisting of a total of 100,000 units of penicillin given in 3 doses of 33,333 units each at 2-hour intervals, was instituted for patients with sulfonamide resistant gonorrhea.
3. Complications were seen in 13 of the 54 patients treated.
4. The patients varied widely as to age: 16 were male and 38 female; 27 were white and 27 Negro.
5. Of the 42 cases followed, 95 per cent satisfied the established criterion of cure, 3 consecutive negative cultures over a minimum of 21 days after the first treatment.
6. The 2 failures were cured by retreatment, giving a rate of cure of 100 per cent.
7. All complications cleared up rapidly.
8. Neither previous treatment nor duration of infection seemed to affect the results.
9. There was no evidence of toxicity in any patient.
10. Our experience indicates that a shortened schedule for the penicillin therapy of gonorrhea in outpatients is effective.

Sir Alexander Fleming—Discoverer of Penicillin

Dour, white-thatched Sir Alexander Fleming, discoverer of penicillin, is fearful of the consequences of uncontrolled distribution of his "baby." In a recent interview Sir Alexander remarked that there was danger of "educating the microbe to resist penicillin." In his talk at a dinner tendered him by penicillin producers and the following evening he again referred to this fear. "The greatest possibility of evil in self-medication is the use of too small doses so that instead of clearing up the infection, the microbes are educated to resist penicillin and a host of penicillin-fast organisms is bred out." But he went on to express the hope that this danger could be averted.

The grave-eyed, modest hero of healing described some early difficulties in isolating and identifying *Penicillium notatum* mold after the chance discovery of its powers. He recalled that the original strain of *Penicillium notatum* was isolated by a Swedish pharmacist named Westling, from decaying hyssop. The earliest reference to penicillin might be the portion of Psalm 51 that says, "Purge me with hyssop that I shall be cleansed."

Dr. Coghill, of the Northeastern Research Laboratories in Peoria, once described the search for the best-producing strain of *Penicillium notatum*. Among other things, Air Forces pilots were requested to bring back samples of mold from the "four corners of the earth," but in the end, the highest yield of penicillin was found on a moldy cantaloupe rescued from a Peoria backyard!

TWENTY-FIVE YEARS AGO†

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. XVIII, No. 9, September, 1920

EXCERPTS FROM EDITORIAL NOTES

Vote No on Number 5 the Chiropractic Initiative.—Certain groups of Chiropractors apparently believe that California can only be won by violence and that the violent will bear away the palm. The campaign for this purpose was outlined in "Fountain News," page 4, Number 34-35, published by the Palmer School of Chiropractic, Davenport, Iowa. . . .

The proposed Chiropractic Initiative Measure which will be presented for vote of the people at the November general election, is loosely drawn and full of ambiguous provisions, which by subtle suggestion seek to lull suspicion as to the dangers that lie hidden in the verbiage. . . .

EXCERPTS FROM ORIGINAL AND OTHER ARTICLES

From an Article on "Prehistoric Trephining of the Frontal Sinus," by Frank Albert Burton, M.D., San Diego, Calif.—For investigation and study, new and most interesting material has been made available through the establishment of the Museum of Man at San Diego under the direction of Dr. Edgar L. Hewitt, Director of the School of American Research. . . .

While studying the nasal accessory sinuses of the skulls in the Museum I came across one of undoubted trephining of the frontal sinus. This gave the incentive, and a careful search through the entire collection resulted in finding two more with trephine openings into the frontal sinus. The study of these specimens, as well as the review of the literature, was most interesting to me and believing it would interest you accounts for this paper today. . . .

From an Article on "Hookworm and Amoebiasis in California," by C. A. Kofoid, Professor of Zoology, University of California, Berkeley, California.—Two diseases of parasitic origin which may be expected to appear in the routine of any physician's practice in California are hookworm and amoebiasis. Both are infections primarily of the digestive tract and may be detected by faecal examination, though their symptoms are exceedingly varied, and, especially in the case of amoebiasis, may give no clue to the location and nature of the infection. . . .

From an Article on "Basal Metabolism in Thyroid Disease, as an Aid to Diagnosis and Treatment, with Notes on the Utility of the Modified Tissot Apparatus," by Albert H. Rowe, M.S., M.D., Oakland, Calif.—The minimal metabolic change resulting from the continuous organic functions of the body which are essential to life is termed the basal metabolism. This basal metabolism can be measured by a calorimeter either by the direct estimation of the heat produced in the body, or by calculating the heat production from the amount of oxygen used and the CO₂ given off as a result of the oxidation going on in the organism. . . .

(Continued in Front Advertising Section, on Page 26)

† This column strives to mirror the work and aims of colleagues who bore the brunt of Association activities some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

Historical reminiscences, papers and other archives will be welcomed by the C.M.A. Committee on History, to whom such should be sent. Address same to the Committee's Secretary, Dr. George H. Kress, Room 2004, 450 Sutter, San Francisco, 8.

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA†

By F. N. SCATENA, M.D.

Secretary-Treasurer

Board Proceedings

An unusually large number of examinees appeared for oral examination at the Board office, Los Angeles, on August 11th.

The next regular meeting of the Board will be held at 1020 N St., Sacramento, from October 15th to 18th, 1945.

At the recent meeting held at the Elks Club, Los Angeles, the Board considered petitions for restoration of revoked certificates and also acted on twelve complaints for unprofessional conduct, several of which had been continued from previous meetings.

The Board of Medical Examiners at its regular meeting held in Los Angeles, August 13 to 16, 1945, took the following actions in regard to the status of licentiates:

Ferdinand M. Ferguson, M.D., was found guilty of habitual intemperance on August 15, 1945, and his license was revoked;

Milton Francis Novotny, M.D., was found guilty as charged in Order to Show Cause and his license was revoked on August 15, 1945;

Maurice J. Pullman, D.S.C., was on August 16, 1945, found guilty of alleged illegal advertising, under Section 2409 of the Business and Professions Code, and he was placed on one year probation;

Courtland Rothwell Sanborn, M.D., was on August 16th, 1945, found guilty of narcotic law violation, under Section 2391 of the Code, and his California license was revoked;

Bim Smith, M.D., was on August 15, 1945, found guilty of narcotic addiction under Section 2390 of the Code and his California license was revoked;

Roy Reginald Lessing Sturges, M.D., was found guilty on August 16, 1945, of illegal operation and his California license was revoked.

News

"Many a woman physician has been wondering during these hectic days on the home front when her services have become much in demand 'What's my outlook when the war is over and the men doctors come back and take over again?' An encouraging answer to this very natural query has just come from the Women's Bureau of the U. S. Department of Labor as result of a survey of post-war opportunities for women in medical services. 'There never has been a time when adequate medical care was available to all the population,' the report states. 'Indications are that the increased demand in the postwar years for physicians of all types will more than offset the initial increase in the supply trained under the accelerated program during the war. General agreement is that women now studying medicine are likely to have greater rather than less opportunity than those who preceded them.' . . ." (San Francisco Chronicle, July 27, 1945.)

"Senator Sheridan Downey, D., Cal., today introduced a resolution to authorize the military affairs committee

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† The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6. News items are submitted by the Secretary of the Board.